15289

EX LIBRIS COLL MED PHILAD INSTIT A D MDCCLXXXVII
NON SIBI SED TOTI

No

Digitized by the Internet Archive
in 2014

https://archive.org/details/chicagomedicaljo2618unse

THE

CHICAGO MEDICAL JOURNAL.

Vol. XXVI.—JANUARY 1, 1869.—*No.* 1.

PATHOLOGICAL CHEMISTRY.

Researches into the Elimination of Bromides, and into the presence of Bromine, normally in the organism.

REPORTED TO THE BIOLOGICAL SOCIETY (PARIS), BY DR. RABUTEAU.

ALTHOUGH I have already published, in the "Gazette Hebdomadaire," of the 24th of April, the process which I employ in order to detect traces of a bromide in the urine, I think I may repeat it here. I add a small quantity of pure soda to the urine, then I evaporate it to dryness. The residue is next heated to redness, in a porcelain capsule, then treated with distilled water. After filtration, I obtain a liquor as clear as spring-water, in which it is easy for me to detect the bromides which it may contain, by pouring upon it *Nitric acid*, which liberates the bromine, and by collecting this last by the aid of sulphuret of carbon. In proportion as the bromide exists in greater or less quantity, the sulphuret of carbon is colored an intense red, or an orange yellow.

This process is long and extremely difficult, but it is consistent with the greatest delicacy. In fact, if 500 grammes of urine be evaporated, and if the liquor resulting from the

washing of the residuum amount to only ten cubic centimetres, it is possible to detect even the $\frac{1}{1300000}$ part of bromine.

I published, likewise, the principal results of my investigations into the metamorphoses, and the mode of elimination of bromates, and it will be perceived that I have detected bromides in my own urine, and in that of dogs and of rabbits, several days after the absorption of small quantities of bromates. These facts have constituted for me the point of departure for new investigations into the elimination of bromides.

On the 3rd of March, I took, fasting, one gramme of *Bromide of Potassium*, dissolved in fifty grammes of water. From the tenth minute I found bromine in my urine, and my saliva; but what astonished me was, that on the 20th of March I obtained a beautiful orange yellow color, with sulphuret of carbon, after having evaporated 100 to 150 grammes of urine. Subsequently to this date, I was able to evaporate larger quantities, 300 grammes for example, but then bromine was constantly detected, even at the end of fifty-two days. On the other hand, the urine of a dog, which I had cured of saturnine intoxication, by the aid of *Bromide of Potassium*, manifested the presence of bromine after two months, so that I regretted infinitely not having analyzed my urine, and that of my dog, before taking the medicine. I then examined the urine of a great number of persons; I even brought specimens of urine from the country, *and in all I found bromine, when I had evaporated from three to four hundred grammes of it.* I could not detect any of it, when I experimented upon only one hundred to one hundred and fifty grammes. These different experiments repeated nearly two hundred times, have induced me *to conclude that bromine exists normally in the organism;* as to that which has been found by evaporating only one hundred to one hundred and fifty grammes of urine, it may be said that it originates from the administration of a bromide, and as I have found it under these circumstances in my own case, during three weeks, in the case of a rabbit during sixteen days, in that of another

rabbit during twenty-five days, after the ingestion of *Bromide of Potassium*, or of different bromates, I may draw this conclusion that *the bromides are eliminated slowly*.

I wrote, on the 24th of April, in the "Gazette Hebdomadaire," that the bromide of potassium appeared during more than a month in the urine, and in the saliva, even when the dose absorbed had been only one gramme. I did not imagine then that bromine existed normally in the organism; I believe to-day, that one gramme of bromide of potassium would disappear at the end of three weeks, and I base my belief upon this, that, under ordinary circumstances, bromine is not found in the urine, when only one hundred and fifty grammes of this liquid have been evaporated, at least when only a certain dose of it has been absorbed with any special intention. As to the bromine which is detected always after having evaporated three to four hundred grammes of urine, I call it normal bromine, and it penetrates every day into the organism by alimentation.

What is the origin of this normal? I am actually engaged in investigations into this subject, and I propose to report to the Biological Society the results at which I shall arrive.

M. Laborde insisted upon the difficulty of the investigation of bromine in the urine, the coloring matters of this liquid being capable of inducing error.

M. Rabuteau said that, in fact, the examination was very difficult, even when bromine has been artificially added to the urine. It is for this reason that he would proceed by incineration preferably.

M. Chalvet would desire that for this demonstration of bromine in the normal state in the urine, we should not be contented with reactions; he should desire that the metalloid be isolated.

M. Rabuteau subsequently communicated the results which he had obtained from the ingestion of *Perchlorate of Potassium*, the most noticeable of which was retardation of the pulse.

15289

PHYSIOLOGICAL AND PATHOLOGICAL CHEMISTRY.

I. *Sulphate of Quinine* does not diminish the urea.

II. Physiological studies of *Perchloride of Potassium.*

The use of the salt against intermittent fevers,—by Dr. Rabuteau.

It is well known that *Arsenic* is employed successfully against simple intermittent fevers, and that it diminishes the urea to a considerable extent. I could cite upon this subject different experiments, made upon well fed dogs, in which I have seen this element diminish from 65 to 16 parts per 1000, under the influence of a few centigrammes of *Arsenite of Potassium*, then increase to the normal amount after the elimination of the poison.

Is this the case, likewise, with *Sulphate of Quinine?* It seems not, from some experiments already made, and in order to contribute to the elucidation of the question, I have made the following investigations, at the suggestion of one of my preceptors, M. Sée, Professor of the Faculty of Médicine.

First Experiment.—1*st. Sulphate of Quinine.*— On the 9th of May, at 9.30 P. M., I took one gramme of *Sulphate of Quinine.* At 11 o'clock I commenced to experience ringing in the ears; my intellect became less clear; I went to bed, and slept a little, with the design to experience more fully the effects of the medicine. When I arose, I observed a real titubation. The pulse was retarded, but what attracted my attention much more than the retardation, was the weakness of the cardiac impulse. The next day, at 6 o'clock, the tinnitus aurium still persisted, it diminished gradually, and at 8 o'clock was no longer perceptible. If I enter into the detail of well known facts, it is because I have experienced the same phenomena, except the tinnitus aurium, after having taken five grammes of *Perchloride of Potassium.* I shall soon have to speak of this new drug, destined, perhaps, to future importance. I had measured the urea eliminated during the two preceding days; I collected my urine at different inter-

vals, and analysis demonstrated that the *Sulphate of Quinine* had occasioned no variation in the quantity of urea, which the following figures demonstrate:

DAYS.		Urine of 24 hours.	Urea per 1000.	Total urea eliminated during 24 hours.
May 7th, up to 6 P. M.,		10.85	20.12	21 83
May 8th to 9th,		9.65	22.65	21.85
	Urea per cent.			
From May 9th to May 10th.	From 6 to 9 P. M. ... 16.76			
	" 9¾ to 10½, ... 25.88			
	" 10½ P. M. to (May 10th) 5 A. M. ... 28.82	10.71	22.06	23.62
	" 5 to 8½ A. M. ... 20.88			
	" 8½ to 12 M. ... 20.88			
	" 12 to 6 P. M. ... 19.70			
From 10th to 11th.	May 10th, from 6 to 9 P. M. ... 18.23			
	From 9 P. M. to 9 A. M., May 11th, ... 25.87	9.70	23.53	22.82
	From 8 A. M. to 6 P. M. ... 20.88			
From May 11th to 12th,		10.80	23.50	25.38
" " 12th to 13th,		11.60	18.23	21.15
" " 13th to 14th,		11.20	20.00	22.40

The figures of the third column present considerable differences, which are very easily explained, for it is known that urea exists normally in larger quantity in the urine of the night.

Second and Third Experiments. — These were made upon a dog of large size, whom I had caused, during the early portion of March, to swallow ten grammes of *Bromide of Potassium*, with a double intention. In the first place, I desired to cure him of acute saturnine intoxication, caused by twenty centigrammes of *Acetate of Lead*, and in the second place, to study the elimination of the bromide. This dog had been immediately cured, and his health had remained perfect; I had, moreover, nourished him perfectly.

From the date of the 8th of May, I gave him four hundred grammes of cooked meat, and two hundred grammes of bread, daily, at 6 o'clock, P. M. On the 10th of May, at 4 o'clock, P. M., I made him swallow two grammes of *Sulphate of Quinine*, mixed with a little food, but he left a portion of the food;

at this time I observed already a certain dullness, which became more and more marked. At 7 o'clock the cardiac pulsations became less numerous; the dog walked unsteadily; he gazed at me in a most singular fashion. At 9 o'clock he vomited the greater portion of the food which he had swallowed. I noted this fact, for it explained the diminution of the urea found the next day. The succeeding days his health was perfect.

On the 17th and 18th of May, at 2 o'clock, P. M., I made him swallow one gramme of *Sulphate of Quinine*, thinking that in this dose that salt would not cause vomiting. My conjectures were verified.

Below are the results which have been furnished me by analyses of the specimens of urine collected at different periods:

Days.	Urea per 1000.
May 9th, 9 A. M.,	51.47
" 10th, "	50.69
" 10th, 4 P. M., before the experiment,	47.05
" 11th, 9 A. M.,	36.18
" 12th, "	52.94
" 13th, "	55.80
" 14th, "	58.21
" 15th, "	57.35
" 16th, "	60.00
" 17th, "	60.00
" 17th, 6.45 P. M.,	57.35
" 18th, 9 A. M.,	63.82
" 18th, 7 P. M.,	53.82
" 19th, 9 A. M.,	57.35
" 20th, "	58.25
" 21st, "	57.90
" 22nd, "	50.00
" 23rd, "	60.00
" 24th, "	58.82

The preceeding figures exhibit some marked variations, but they prove no diminution of the urea under the influence of the *Sulphate of Quinine*, for the differences observed are readily explained. The lowest figure is 36.18, but the dog had vomited his food the preceding evening, and had eaten

nothing since. Other sensible differences appear between the figures furnished by the analysis of the specimens of urine of the morning and the evening, now it is known that the former contains normally a greater quantity of urea. This is what I have frequently observed. Since then the urea is not diminished, since on the other hand the *Sulphate of Quinine* is antipyretic, reduces the temperature, and consequently diminishes combustion, it is absolutely necessary to seek elsewhere for the deficit in the products of this very combustion. It is extremely probable that this deficit bears upon the carbonic acid; but I have not yet investigated this subject.

2. *Perchlorate of Potassium* ($KClO^4$).—This salt, when it is perfectly pure, presents itself under the appearance of a white powder, composed of small prismatic crystals. It is about three times less soluble than the *Chlortae of Potassium* (?), but it is much more permanent than this last, for it needs a much higher temperature to effect its decomposition into *Chlorate of Potassium* (?), and into oxygen.

The *Perchlorate of Potassium* of commerce is not pure; the specimens which I have had under examination have contained nearly two-thirds of their weight of chlorate. In order to purify it, I at first proposed to treat it with *Sulphuric acid*, which has the effect to destroy the chlorates. This process is a good one, but only when there was only a small quantity of the chlorate. I then devised another process, based upon the property which *Hydrochloric acid* possesses of decomposing chlorates, by producing an evolution of chloro-chloric (?) gas, and leaving the chlorides as residue.

I treated the impure perchlorates with boiling *Hydrochloric acid*, diluted with half its weight of water. There is disengaged, when cooled, a yellow vapor of a peculiar odor, recalling that of chloric acid, or of the peroxyd of chlorine. The liquid is tested from time to time, and when it no longer discolorizes indigo, from the effect of the *Sulphurous acid*, it is certain that the perchlorate is freed entirely from the chlorate. It only remains to separate the perchlorate by decantation, and to treat the residuum with boiling distilled

water, which dissolves the chloride and leaves the perchlorate, which is but slightly soluble. This process necessitates the loss of a certain quantity of the material, but the residuum obtained is perfectly pure.

But how shall we detect the presence of the perchlorates in the urine? I have sought in vain thus far a simple and accurate process. I have hence been compelled to adopt the following, which presented itself naturally to my mind. I precipitate, first, the natural chlorides, by means of *Nitrate of Silver*, I then boil the liquid and filter it. I remove next, the excess of *Nitrate of Silver*, then boil anew and filter a second time. The clear liquid thus obtained is evaporated to dryness; the residuum is next heated to redness, in order to transform the perchlorate into chloride, which I effect easily, by the ordinary methods. The process is long but accurate.

My investigations into the *Perchlorate of Potassium* consists of preliminary experiments made upon animals, and of experiments made upon man, with the view to study the physiological effects of this salt, and its mode of elimination. I will say nothing of the first investigations, which will be published hereafter, but will pass immediately to the second series of experiments.

1st. On the 3rd of July, at 4 P. M., I took five grains (grains or grammes?) of *Perchlorate of Potassium*, partly dissolved, partly suspended, in fifty grains (?) of water, then I drank fifty grammes of pure water. The taste of the salt was exceedingly feeble, and, although the undissolved portion was necessarily brought into direct contact with the gastric surface, I experienced no epigastric sensation. But I was soon strangely surprised; I experienced sensations similar to those produced by *Sulphate of Quinine*, except the tinnitus aurium. My gait was staggering; I felt a heaviness of the head, especially in the frontal region; my ideas were confused; the pulse was retarded, and the natural heat appeared to be diminished. Toward half past seven this intoxication, which I termed chloric intoxication, diminished perceptibly, and at 8 o'clock it had disappeared.

My urine and saliva were collected at tolerably frequent intervals, in order to be subjected to analysis. I perceived, also, that the salt was rapidly eliminated, that it appeared after ten minutes in these two liquids, and that it could no longer be detected after forty-eight hours. I determined, moreover, that it produced some diuretic effect, and that it did not diminish the quantity of urea; this last property establishes one more analogy between *Perchlorate of Potassium* and *Sulphate of Quinine*. The results of my analysis are comprised in the following tables:

DAYS.	Urine of 24 hours.	Urea per 1000.	Total urea eliminated in 24 hours.
From July 1st to 2nd,.....	9.00	21.20	19.08
" " 2nd to 3rd,.....	9.60	18.23	17.50
" " 3rd to 4th,.....	12.26	16.40	20.10
" " 4th to 5th,.....	9.20	23.70	21.83
" " 5th to 6th,.....	9.15	22.17	20.28
" " 6th to 7th,.....	10.25	20.15	20.65

Perchlorate of Potassium against Intermittent Fever.—The curious effects produced by this salt, this intoxication, comparable to that induced by *Sulphate of Quinine*, have suggested to me the idea that the *Perchlorate of Potassium* might be useful in intermittent fevers. I also desired earnestly to embrace the opportunity to employ it, whenever it might present itself to me.

Second Experiment. — A young man, twenty-five years of age, had two years previously contracted intermittent fever in Wallachia. Since his return to France he had been subject, about every six months, to daily recurrences, which he controlled by *Sulphate of Quinine.*

On the 21st of July a paroxysm recurred; he consulted me at that time, and informed me that he would have a similar paroxysm on the following day about 3 P. M., unless he should take *Sulphate of Quinine.* As yet he had taken no medicine. I gave him five grammes of *Perchlorate of Potassium*, which I had myself purified, and directed him to take

this dose, with water, at once, the next day at 2 o'clock, which was done. *The fever did not return;* but there were substituted for it symptoms similar to those which I had already experienced. My patient perceived his gait become unsteady; he was obliged to grasp the railing of a staircase in order to descend it; his ideas became confused, and his head was dull. All disappeared toward 6 o'clock, that is to say, four hours after the ingestion of the drug. Every thing had occurred as in my own case. It is extremely probable that if I had examined my patient during this time, I would have found his pulse retarded.

If the febrifuge properties of *Perchloride of Potassium* should be verified, therapeutics would possess a new and valuable agent, especially when it might be necessary to act promptly. We know that the effects of *Sulphate of Quinine* are not developed immediately, and that we find ourselves helpless in the presence of an attack of pernicious fever, as the *Perchlorate of Potassium* acts almost as soon as it is absorbed, it merits special investigation. I insist upon but one single condition, *upon the use of a pure article;* for the perchlorate of commerce contains a large proportion of chlorate. I have designated the mode of separating it from this latter salt.

M. Láborde was ignorant whether the therapeutic action o f *Perchlorate of Potassium* had been previously studied, it is known from the investigations of M. Socquet (de Lyon) that it was hyposthenetic.

M. Isambert also believed that the *Perchlorate of Potassium* had never been the subject of physiological or clinical investigation, as to the researches of M. Socquet upon *Chlorate of Potassium*, they do not appear to demonstrate very clearly the hyposthenetic action of this salt.

A CASE OF FIBROUS CANCER OF THE STOMACH.

By R. G. Bogue, M.D., Surgeon to Cook County Hospital, Chicago.

W. S. Bogue, aged sixty-nine, has always been a healthy man, except about twenty-four years ago, when he was sick of inflammatory rheumatism for about six months; since which time he has had hardly a sick day, until July, 1867, when he began to complain of some slight dyspeptic symptoms; noticing that some accustomed article of food did not relish as well as usual, or positively disagreed with him — but seldom was there any pain or distress after eating. A good deal of gas was eructated, no pain nor tenderness in the epigastrium, bowels regular, no vomiting, no nausea, emaciation gradual and persistent, also gradual loss of vigor. This condition continued for seven or eight months without abatement, and without any particular suffering. Some article of food would be relished for a time, then be loathed, giving place to some other, to be in its turn treated the same way. During all of this time there was constant loss of flesh and strength. In March or April of the present year (1868), there began to be rather more distress in the region of the stomach, with a little tenderness on pressure, no definite tumor, but an induration could be distinguished, supposed to be of the stomach or pancreas — there now began to be spat up about half a pint of clear mucus daily, which seemed to come from the œsophegus, as there was no cough whatever, and no condition of the fauces to produce it. Occasionally some article of food would be ejected from the stomach soon after being taken. There was always more distress when lying down, particularly after having been asleep for a time, which seemed to be from an accumulation of gas, for it would be relieved by moving about, which would cause the eructation of quite a quantity of gas; bowels inclined to be constipated.

From this time forward the history was briefly an increase

of all the symptoms, making it a case of malignant disease of the stomach, more pain, tenderness, increased tumefaction, occasional vomiting, total loss of appetite, and more rapid emaciation and loss of strength. During the latter part of June, and early part of July, he was quite unable to take any thing into the stomach, except a little wine, and could take at a time not more than two or three teaspoonfuls of that — any thing except the wine caused a good deal of distress, and frequently vomiting.

About July 4th, any attempt to introduce nourishment into the stomach was abandoned; and extract of beef, by injections, substituted — a table-spoonful of the extract dissolved in about four ounces of warm water, was introduced into the rectum four or five times a day, which was, after a few days, increased to two table-spoonfuls. This constituted all the nourishment used until death — for nearly two months, except during the last week, when an egg, beaten thoroughly, with a little syrup and wine, was used two or three times a day in addition to the former.

When this mode of nourishing was begun, he had been confined to the bed for a week or more—from this he seemed to get more nourishment, and was relieved from pain, and was able to be up about the house and yard, and even come to the city from Hyde Park, some four or five times in the course of two or three weeks; yet the emaciation continued, and the temporary increase of vigor soon began to diminish, and for the last two weeks preceding death he was confined to the bed, unable to speak above a whisper; and during the last four days only semi-conscious, seeming to suffer but little, dying very quietly on the morning of the 29th of August, 1868. About a week before death there was an attack of hæmorrhage, some two or three ounces of blood being spat up without distress or effort, this was the only hæmorrhage that occurred during the course of the disease.

During the early part of the disease, and in fact for the first six or seven months, the diagnosis was obscure; rendered so by the absence of the more prominent symptoms of

malignant disease of this organ, viz., vomiting, pain, and detection of a tumor; but this condition was suspected from the persistence of the dyspeptic symptoms, with the constant emaciation and loss of vigor.

During this time some of the ordinary remedies for dyspepsia were used, such as *Bismuth*, and *Rhei*, *Sodae* and *Rhei*, *Rennet*, wine, and a few other similar ones, together with bathing and friction over the abdomen, allowing the patient to select for food whatever he seemed to relish.

The remedies, of course, did no good, not even temporarily. After it became quite evident what the malady was, the only thing used was *Elixir Opii*, ten to twenty drops two or three times a day, to relieve distress, and to check the secretion of mucus, which it did; a small blister was applied over the epigastrium, at two different times, which relieved the pain somewhat, temporarily.

Post-mortem examination, twelve hours after death. Body extremely emaciated, rigor mortis moderate. Contents of thorax, lungs, and pleuræ perfectly healthy; heart and pericardium normal; aorta, from its very commencement at the heart, throughout its whole extent, in this cavity and the abdominal, to very near its bifurcation, involved extensively by œtheomatous degeneration, but this was not noticed in any of the other vessels. Abdominal cavity and liver normal; spleen, in appearance, healthy, but very small, weighing only one and three-fourth ($1\frac{3}{4}$) ounces; intestines normal; kidneys normal; bladder, etc., normal; pancreas normal. Stomach extremely contracted, with its walls excessively thickened, being three-eighths ($\frac{3}{8}$) of an inch thick where it was opened, which was along the anterior wall, from cardiac orifice to the pylorus. The largest or thickest part was that of the left end of the organ, or that corresponding to the great cul de sac. The whole wall was hard, cutting very toughly, the peritoneal, muscular, and mucous coats seemed blended into one mass, there being no trace of mucous membrane as such, except a small patch near the pylorus; it was not destroyed by ulceration, but seemed to be obliterated or replaced by

the infiltration; there was no ulcerated surface. The disease was confined to the walls of the stomach, mostly stopping abruptly at the æsophagus, and also at the duodenum; the pylorus being large, and hanging in the duodenum like an os uteri in the vagina. The duodenum and æsophagus were perfectly healthy. The gastro-colic omentum was somewhat infiltrated and contracted, and the transverse colon adherent to the mass, but the intestinal wall was not diseased. A few lymphatic glands in this part of the omentum were slightly enlarged, but none others were noticed to be infiltrated.

The peritoneal covering of the diaphragm throughout its whole extent, was thickened to the extent of half a line or more, with this same infiltration, feeling hard, and in places being a little corrugated, these places resembling cicatrices. It was contracted, for the partition was more tender than natural, and not arched upward as much as usual.

No other portion of the peritoneum lining the cavity, or covering the intestines, was in this condition, but was, to all appearance, healthy.

The stomach measured, along the small curvature, three and a half ($3\frac{1}{2}$) inches; along the cavity, from the cardiac orifice to the pylorice, was four and a half ($4\frac{1}{2}$) inches; and around the great curvature it measured eight and a half inches. The cavity was so much contracted that it would not hold more than an ounce and a half of fluid. The whole wall was so thick and unyielding that it could not be distended. The involvment of the entire stomach in cancerous disease is rare, and for it to be infiltrated and contracted throughout, and being confined almost wholly to that organ, as in this case, must be exceedingly rare. The absence of any tumor led to obscurity in the diagnosis, neither was there any of the sallow complexion, which is so generally looked upon as evidence of cancerous disease. But its malignant character was inferred from the persistence of the symptoms, and the gradual but constant emaciation. And from the increasing inability to take food it seemed that the stomach must be the organ implicated.

There is one thing that I would call particular attention to in this case: which is the length of time the patient was kept alive by nutritive enema. This was for nearly two months, or fifty-five days. After this was commenced, the strength of the patient increased for some weeks, and during all of this time there was no sensation of hunger; yet there was constant emaciation, and death seemed to be the result of absolute starvation.

The inference I draw from this is, that life may be prolonged for a considerable time, by this mode of introducing nourishment, but the body is not nourished. In other words, there seems to be enough nutriment absorbed to continue life, but there is no surplus appropriated. The fact that a person may be sustained for so long a time in this way, may be a valuable hint in cases of gastric affection, where it is essential to leave this organ at rest for some time, also in operation upon the æsophagus or mouth.

Under the microscope this seems to be composed of fibrous tissue mostly, with a few irregular cells, having the appearance of being pinched or contracted by the fibrous material surrounding them.

A CHILD WITHOUT CALVARIA OR BRAIN.

Reported by L. Redmond, M.D., Preston, Minn.

Editor of Chicago Medical Journal:

On the evening of the 14th of November last, I was called to see Mrs. D. On my arrival I was informed that she had given birth to a still-born female child, which, on examination, I found to be perfect in form, with the following exception, viz.: There was not the slightest trace of a calvaria or brain. Both parietal, the occipital and frontal bones were entirely absent, excepting the orbital plates of the latter. Stretching across the uneven surface of the base of the skull, was a thin transparent membrane, which seemed to be a con-

tinuation of the skin. Beneath this membrane there was a small quantity of serous fluid of an amber color. On making inquiry, I was told, by Mrs. D., that during her gestation she had enjoyed good health, up to within six or eight weeks of her confinement, when, on returning from the spring one day with a pail of water, she slipped and fell with her right side on the pail. Since the above unfortunate accident she has been very miserable, part of the time up and about, the remainder in bed, but suffering more or less pain all the time throughout the abdomen, but especially in the right side. I should state in this connection, that since the fall Mrs. D. is not conscious of having felt any movement of the child whatever.

Now, Mr. Editor, what was the cause of this malformation? Did the fall upon the pail injure the child's head, so that inflammation and softening of the brain (or rather its liquefaction, including the contiguous osseous structures) was the result? or, are we to look to some obscure and inexplicable cause for this remarkable malformation?

HOW DOES GELSEMINUM DESTROY LIFE?—ANTIDOTES AND REMEDIAL MANAGEMENT.

By Z. C. McElroy, M.D., Zanesville, Ohio, President Muskengum County Medical Society.

The case of poisoning by the *Fl. Ex. Gelseminum*, reported by Dr. W. F. Hané, in the Journal for December 1st, 1868, must be the writer's apology for endeavoring to communicate some knowledge on the subject of poisoning of a general character, applicable to Dr. H.'s case, as well as to all other cases of poisoning.

As physiology and pathology advance in their course, to their ultimate positions of exact sciences, definitions must necessarily be narrowed down to embrace but single points. The term poisoning is exceedingly loose, and is to be taken

in no sense as scientific. It is strictly popular. A few propositions may serve to place the whole subject definitely before the mind.

1*st.* The forces, powers, or dynamics of the human body are derived from the oxidation, waste, or destructive metamorphosis of its own nerve and other tissues; with, possibly, the oxidation of some articles consumed as food, without passing into organized tissue. The word *possibly* is used understandingly, for only the first part of the proposition is definitely known. The second part may *possibly* be true, but it awaits demonstration.

2*nd.* Articles classed as poisons in the professional, as well as in the popular mind, have two modes, at least, of producing death, viz.: 1st. By arrresting destructive metamorphosis in the nerve masses supplying the dynamics of the brain, heart, or lungs. 2nd. Or directly the reverse of this, by promoting destructive metamorphosis in the same nerve masses, and furnishing excess of dynamic force to the same organs.

3*rd.* Fluids, in or out of the living body, obey the ordinary laws of gravitation, when not controlled by superior forces or dynamics. Applying these principles to explain the mode of death by *Gelseminum*, it will be seen that, taking the symptoms as detailed by Dr. H. (and they are correct), that death was due to paralysis of the heart and lungs. This paralysis is due to an arrest of destructive metamorphosis in the cerebellum, and upper portion of the spinal cord; though, very probably, the paralysis was general, but death was due to arrest of oxidation in these particular parts. *Gelseminum*, then, produces death by suspending, or by furnishing conditions suspending molecular metamorphosis or waste in the nerve masses, supplying the dynamics of the circulation and respiration.

Gelseminum is but one of a class of which *Opium*, *Belladonna*, *Chloroform*, *Aconite*, etc., are examples of others. *Strychnia* is an example of the other class, producing death in a mode precisely opposite to *Gelseminum*. It furnishes conditions for increased destructive metamorphosis in the

same nerve masses supplying the dynamics of the circulation and respiration; the excessive force liberated, interrupting the alternate contractions and expansions of the lungs and heart, producing permanent contraction of the heart, and the muscles of respiration. As with *Gelseminum*, the paralysis was general, so with *Strychnia*, the contractions of the muscles are general, every thing rigid, and death due to excessive dynamics.

In one or the other of these two ways all poisons act which do not at once destroy tissue, as *Acids*, *Caustic Alkalies*, etc. In the not distant future these distinctions will be recognized in text-books.

The mode by which *Gelseminum*, and other agents of its class, produce death, being thus definitely determined, the indications for treatment are about as follows:

1*st.* If seen sufficiently early, prompt evacuation of the stomach should be obtained by emetics, or by the stomach-pump. If, after the evacuation of the stomach, the symptoms continue to deepen, other measures must be relied on to carry the patient through the crisis. They would be:

2*nd.* Place patient on table, or board, with supports in the middle and at both ends. As the paralysis increases, the circulation comes under the control of the ordinary laws of gravitation, and settles to the most dependent positions of its circuit in the dying body. Now, to make this gravity an aid in prolonging life, alternately depress the head and feet of the patient. As the head is inclined to an angle of 45°, the blood fills the brain, and dependent portion of the body, at the expense of, what for the moment is, the upper, including the lungs. Reverse the position, placing the head at an angle of 45° elevation, the circulation will flow to the dependent parts of the body, which are for the moment again the abdomen, and legs, though the lungs will receive their share in this position, as they lose it when the head is inclined. That is what may be called the conversion or correlation of gravity into organic force. As life may be sustained with ten to twenty pulsations of the heart, per minute, this alternate

elevation and depression of the head should take place every three to five seconds. Brisk friction to and from the brain would aid considerably.

3rd. Artificial respiration. Inflating the lungs by Marshall Hall's method, or by any other way, so that air charged with its due proportion of oxygen may be forced in, and not the breath of another person, charged with carbonic acid. As the artificial respiration conveys the life-giving, as well as the molecularly destructive oxygen into the lungs, in such way as to render the oxygenation and decarbonization of the blood possible, destructive metamorphosis may be kept proceeding at a reduced rate, and some power or dynamic force liberated to help carry on the respiration and circulation, and the patient out of a position otherwise hopeless. The lungs should be inflated four to eight times per minute.

4th. As *Strychnia* is an energetic agent in promoting destructive metamorphosis in the nerve masses, in which *Gelseminum* suspends it, it may be profitably used by hypodermic injection, near the medulla oblongata, in doses from $\frac{1}{20}$ to $\frac{1}{100}$ of a grain, according to the extent of the existing paralysis. As a further aid, magnetism or electricity may be passed through the spinal cord. As the condition depends on diminished destructive metamorphosis, and as low temperatures have the same general tendencies, the patient should be surrounded by as high a temperature as the assistants can comfortably bear, if in a room with registers, fire places, or stoves. If otherwise, by artificial heat in any other way, applied immediately to the person of the patient.

5th. If the patient can swallow water, with salines, such as *Bi Carb. Soda* or *Potash*, *Chlorate Potassa*, *Carbonate of Ammonia*, or *Rochelle Salts*, in solution, may be given as they facilitate or promote destructive metamorphosis and elimination. If the efforts to sustain life are protracted, the bladder should be emptied by catheter.

Brandy and *Opium* are agents restraining waste or destructive metamorphosis, and are, therefore, not indicated in the treatment of the paralysis, or suspended destructive meta

morphosis, from *Gelseminum*, through appropriate in poisoning, or excessive destructive metamorphosis, induced by *Strychnia*, in over-doses.

Such are the principal means for combatting poisoning by *Gelseminum*, and all other agents of its class. It is not at all probable that any direct antidote will ever be found acting in the same sense as alkalies act in neutralizing surplus acid in the stomach, to the effects of *Gelseminum*.

The apparent antagonisms, or antidotal effects of *Opium* and *Belladonna*, to the effects of each other, are, to the writer, for the present, an unexplained riddle. Certain it is, however, that combinations of *Opium* and *Belladonna*, in doses of ten drops of a solution of eight grains of *Morphia* to one grain of *Atropia*, in one ounce of water, by hypodermic syringe, expands the pupil widely, and induces the effects of both agents in the system at the same time, as has been verified by the experience of the writer. The reputed antagonisms of *Opium* and *Belladonna*, though apparently illustrated in the same number of the JOURNAL, by Dr. Newman, must for the present, to me, remain a mystery.

UTERINE DISPLACEMENTS.

BY H. WEBSTER JONES, A.M., M.D., ACCOUCHEUR TO COOK CO. HOSPITAL.

FOUR years ago, when commenting in this JOURNAL upon a certain method of treatment previously proposed for these disorders by another, the writer took occasion to enlarge upon means apparently more desirable, contenting himself, however, in simple statement, without illustration or proof.

Since that time, the results of experience, and my observation of the theory and practice of others, as well as the direct queries of many, have more abundantly conduced to the opinion, first, that dislocations of the uterus are underrated, in respect to their bearing upon the comfort and general health of patients; second, that the natural supports of the

organ are not fairly understood in their comparative and mutual relations; and, third, that the difficulties of adjustment, in a great variety of cases, have disheartened some, and altogether deterred others from the use of proper mechanical aids.

It is my present purpose, therefore, to narrate a few cases, illustrating the importance of uterine deviations, whether greater or less in degree, and the need of more careful examinations by medical men, lest these ailments escape the attention they deserve.

Dr. Tilt, in his work on "Uterine Therapeutics," relates the case of a young married lady, who consulted him on account of "continued pain in the sacrum and loins, with bearing down pains increased upon the slightest exertion, so that walking was intolerable to her."

Her sufferings had commenced soon after a labor, two years previous. Many persons had been consulted, but they found no organic lesion or deviation. Cold douches, sedatives, and injections gave little relief. When examined, in the standing posture, the womb did not appear prolapsed or deviated, but on raising it upon the tips of two fingers, the patient exclaimed, "You have taken away all my suffering!" "An air-pessary was applied, which gave permanent relief, and was worn for six weeks, after which time the patient was able to discontinue its use."

Dr. Debout, editor of the "Bulletin Therapeutique," mentions an unmarried lady, who had been reduced to the last stages of inanition by continued abdominal pains.

Several of the first obstetric authorities of Paris, when consulted, had detected "no uterine lesion or displacement," and their suggestions were practically futile. Dr. Debout examined the patient standing, lifted the uterus, and the patient exclaimed at the relief afforded. In this case, also, the air-pessary "removed the pains, permitted food to be taken, and sleep to be enjoyed." "Supporting and steadying the womb, its nerves soon lost a habit of suffering, though the neuralgia had persisted for years."

In August last I was asked to see a lady, who understood that I "had something new for womb-complaint."

She had taken the advice of eminent men, one of whom diagnosed cervical hypertrophy, and proposed amputation. Alarmed, she placed herself under the care of a female practitioner, who cured her of slight ulcerations, and pronounced her "as well as she ever could be." But she stated that her back had ached "most of the time for five years," and at the present time "to walk for half an hour was certain exhaustion, and to sit or stand as long was misery."

An examination of this case disclosed a uterus prolapsed in the axis of the pelvic outlet; a mucous membrane, healthful every where, and a vagina so relaxed as that, when the finger was passed around the cervix, it was very difficult to say where the neck ended, or the vagina began.

The womb was replaced and supported upon a closed-bar lever pessary, and the patient started the same night upon a journey of five hundred miles. A month afterward she reported that she had never traveled with so great comfort, and that "it was ecstacy to be without a back-ache." This relief has continued to the present time.

In October it was my province to treat a case of supposed lumbago and sciatica, occurring in a young unmarried lady. It was her first experience of the kind, and it had commenced soon after a misstep in descending from a table, upon which she had mounted to re-adjust a window shade. After ten days of vain attempts with medicines and external applications, her prone posture in walking, pain in the right loin, and sensation, as of a moving body, within the pelvis, upon any effort at locomotion, led me to examine the uterus. It was prolapsed, and rested upon the rectum. A pessary was adjusted, medicine discontinued, and in less than a day the patient was, in her own words, "as well as ever."

In the cases already related, the symptoms were of so localized a nature as to lead, at an early period, to the suspicion of uterine disorder. But one occasionally meets with an

example of a different sort, of which the following may serve as an illustration:

Early in 1843, a lady from an adjoining town applied to me for relief from an oft-recurring colic, which, seated in the epigastric region, was occasionally so intense as to rob her of reason.

It had been supposed, by her medical advisers, that this pain was due to biliary calculi, but appropriate treatment had proven unavailing, and the patient had for five months been unable to walk, even a few rods at a time, without premonitions of colic.

It occurred *always* after an attempt at sweeping her rooms. She dated the first attack soon after a miscarriage at four months, which had taken place two years previous to our interview.

She presented the aspect of perfect health, menstruated normally, and had noticed no increased tendency to suffer at such periods. She had never had leucorrhœa, and rarely, if ever, back-ache, and I could with difficulty induce her to submit to a vaginal examination, so convinced was she that she had only "liver complaint."

By a digital examination (ocular inspection was not allowed), made in a standing posture, the uterus was found to be completely retroverted, and somewhat enlarged. The pessary of Dr. Hodge was advised and introduced. Two weeks afterward, a larger one was substituted, which remained in situ for about a year, during which time she had not experienced a single attack of colic. I have learned, within a few days, of her remaining in perfect health.

Cases of similar import are not of infrequent occurrence in the writer's experience, but enough has now been said to establish, first, that *much suffering may depend upon the existence of a greater or less degree of uterine displacement;* second, that *such suffering may be hopefully treated by mechanical means, addressed to the erring organs.*

It is, moreover, intimated that the self-consciousness of the patient, as to the origin and seat of her difficulties, as well as

the opinions of previous medical advisers, must not be allowed to divert the physician from such a full and critical investigation, as in his opinion each and every case demands.

These propositions granted, it will be proper to speak, at a future time, of the natural supports of the uterus, their failure in office, and of the qualities necessary to be found in a properly adapted artificial support.

CORRESPONDENCE.

BRADFORD, ILL., *December* 27, 1868.

EDITOR CHICAGO MEDICAL JOURNAL,

Dear Sir: My friend, Dr. L. Bevier, of Linn County, Mo., reports to me the following case, which I think worthy of publication. His practice lies in one of those malarious districts so common to that State, and where cases of the so-called congestive chill and pernicious fever of Wood, are, during the summer and fall months, very prevalent.

On the 25th of July, Mr. Lambert, living close at hand, came running in great haste, saying that his son, a lad of sixteen years, was thought to be dying. Upon the Doctor's arrival, a few moments later, the boy was, to all outward appearances, dead. Respiration had entirely ceased, there was no perceptible pulse, and the surface of the body was cold, and covered with a clammy sweat. Artificial respiration was immediately resorted to, and kept up for a space of two hours, before the natural breathing was resumed. Blisters were applied to the legs and arms, and the body continually rubbed with different substances of an irritant nature. As soon as swallowing could be induced, *Tinc. Capsicum* was administered in table-spoonful doses, every fifteen minutes, until he was able to speak, which was not until four hours from the time artificial respiration was commenced. From this on, under the continued use of *Capsicum*, with the addi-

tion of brandy and *Quinia*, the lad gradually mended, and within ten days was able to go about.

The case is remarkable for the extreme severity of the onset, and the sudden and powerful action of the active cause; and, also, for the great perseverance used for the measures taken for producing re-action, the chief of which was artificial respiration. It shows us that a want of perseverance in such cases in the use of efficient means, is little better than a crime.

Very respectfully yours,

G. Newkirk, M.D.

BOOK NOTICES.

De la Cantharide Officinale These de Pharmacie: Prísentú et soutenue a l'école superieure de pharmacie, par Armand Fumonze, Docteur en Médecine, Pharmacien de 1re. classe, Membre de la société entomologique de France et de la société Chimique de Paris. Paris: Chez Germer Balliere Libraire-Editeur Rue de L'Ecole-de-Médecine, 17.

The above is the title of a most comprehensive monograph, another one of those many monuments of the patient industry, minute investigation, accurate observation of our Gallic confrêres, with which the field of science is adorned.

The author divides his work into four chapters, in the first of which he treats of the natural history of Officinal Cantharides, in the second, of its chemical history, in the third, of the causes which may change or impair its properties, and in the fourth, of the insects and acari which are found intermingled with it.

According to our author, Hippocrates recommended the use of this drug internally in Jaundice, Apoplexy and Dropsy, but was ignorant of its vesicating properties, which seem to have been discovered in the first century by Archigenus, or according to some by Areteus. It appears to have been subsequently used to protect textile fabrics from the

ravages of moths, and somewhat later, as an aphrodisiac, both of which properties our author refuses to accord to it.

After commenting upon the confusion existing amongst the older writers about the identity of the insect, and comparison of the writings of Linnæus, Fabricus, Geoffrey de Geer, Latreille, Dumeril, Andouin and Mulsant, from which it appears that the insect possessing vesicating properties, belongs to the family (tribu) *Meloides*, which is divided into three groupes *Meloe*, *Mylabris* and *Cantharis*, of these the *Mylabris chiconiè* is used in Hindostan, as is likewise the *Meloe trianthemæ*, (which is found upon the blossom of the Cucurbitaceæ), *Mylabris cyanescens* and *Mylabris variabiles*. The *Cantharis vitata* (from the potatoe blossom), is used in South America, together with the *Cantharis adspersa*. The latter of which, according to M. Courbon, possesses very energetic vesicating properties without any irritant action upon the genito-urinary organs. The *Meloe proscaraæus* is used in Spain in Veterinary medicine.

Assuming the *Cantharis vesicatoria* of Linnæus as the officinal species, the author supplies us with a most graphic description of the insect, illustrated with excellent lithographic plates.

In the second chapter, the author reviews in detail the chemical history of Cantharides, from the earliest abortive attempts of various experimenters, previous to, and during the seventeenth century, to detect by analysis its active principle, together with the first apparently systematic one of Moyse Charas, Paris 1681, who seems to have anticipated, almost completely, the more elaborate one of Thouvenel in 1778, which contained essentially the same elements, and appears to have almost completely anticipated that of Beaupoil in 1803.

The first analysis which was successful in indicating the active principle to which the vesicating properties of the insect are due, was that of Robiquet in 1810, and of which the author gives us the detail, and which constitutes what the author terms the last term of the first period of the chemical history of Cantharides.

The second period seems to have commenced with investigations into the method of isolating this active principle, the oldest of which was that of Thierry in 1835, who made use of Alcohol and Ether as menstrua. Our author objects to both of these, to the first from its capacity for dissolving certain other constituent principles, and to the second as not being more active as a solvent than the first, and at the same time dangerous from its inflammability. He prefers greatly, as a menstruum, Chloroform, proposed by Proctor ten years ago, to be succeeded by solution in Sulphuret of Carbon which dissolves every thing except the Cantharidine, which it precipitates. This modification of the process of Proctor is claimed by the author as originating with himself, and he presents us with a *resume* of three experiments illustrative of the process.

In the third chapter, in discussing the causes which may diminish or alter the properties of Cantharides, one of the first referred to, is excessive heat in the drying process hence the open air is preferred, as a medium, to stove heat, and a temperature not exceeding 100°, an elevation to 120° or 125° having been found to diminish materially the activity of the product.

The process of drying in the open air renders the Cantharides liable to the attacks of insects who deposit their larvæ therein. Cantharides are also adulterated by the addition of the powder of the Euphorbium; by the addition of non-vesicating insects; by plunging in oil, to add to their weight, and by the addition of insects exhausted of their active principle

To avoid all sophistications aud adulterations, the author prescribes a very simple rule: select entire, unbroken insects, dry and having the characteristic colors and odor.

With regard to the parasites preying upon these insects and their effects, the author has determined by experiment that — 1st. The Cantharidine (the active principle) is not destroyed by these animals.

2nd. That old Cantharides, although yielding to analysis no Cantharidine, may still preserve all their vesicating properties.

3rd. That moisture being one of the most energetic causes of their degeneration, they should be preserved in a dry place.

This interesting monogram terminates with a detailed description of the insects and acari, which are found mingled with Cantharides either fortuitously or as parasites. This description is accompanied by excellent lithographic illustrations. To the practical pharmacist, or the country practitioner compelled by the exigencies of his position to rely upon his own judgment, in the choice of the agents to be employed in his practice, this monogram can not fail to prove both interesting and valuable.

W. H.

Annual Report of the Surgeon General, United States Army, 1868.

The report gives us the annual financial statement of the department; statistics of sickness, wounded, and the mortality of the white and colored troops, respectively, in their various localities; and the present stage of progress of the Medical and Surgical History of the late war; the condition of the Army Museum, etc., etc. At the date of the report there were forty-nine vacancies in the office of Assistant Surgeon.

A Treatise on Physiology and Hygiene; for schools, families and colleges. By J. C. Dalton, M.D., Professor of Physiology in the College of Physicians and Surgeons, N. Y. With illustrations. New York: Harper & Brothers, publishers. London: Sampson, Low & Marston, 1868. Pp. 399.

The name of the distinguished author of this compend is a sufficient guarantee of the accuracy of the scientific information it contains. From such examination as we have been enabled to give it, it seems well adapted to the designed purpose. It is well illustrated, and provided with a full series of questions, appended to each chapter. We trust to see it favorably received by the public.

A Hand-Book of Vaccination. By Edward C. Leaton, M.D., Medical Inspector to the Privy Council. Philadelphia: J. B. Lippincott & Co., 1868. Pp. 383.

A very complete *resume* of the subject, which should be in the possession of every practitioner. It is divided into fourteen chapters, discussing natural cow-pox; horse-pox; pocks in other animals analogous to the same; vaccinia and vaccinating; lymph supply, conveyance and storage; success of the operation; insusceptibility of individuals; degeneration of lymph; protection afforded; re-vaccination; stamping out local out-breaks of variola; objections to, and alleged dangers of, the practice.

The Opium Habit; with suggestions as to the remedy. New York: Harper & Brothers, publishers, Franklin Square, 1868. Pp. 335.

An intensely interesting work, both to the professional and non-professional reader. De Quincey, Coleridge, William Blair, Robert Hall, John Randolph, William Wilberforce, and other victims of the habit are self-portrayed, together with the author's own experience.

Within our own knowledge the habit is wide-spread, prevailing and increasing. Physicians must attempt to stay its disastrous progress. Better still — *obsta principiis.*

The therapeutics need revising. Our own opinion is, that medical science can furnish better management of these unhappy cases than this book suggests. The difficulties, however, are herein forcibly set forth,

Lectures on the Study of Fever. By Alfred Hudson, M.D., M.R.I.A., Physician to the Meath Hospital. Philadelphia: Henry C. Lea, 1869. Pp. 316.

A very useful book, far in advance of many works on the subject, even of recent date. The author "furnishes the student with a guide to his bedside analysis of each case, by treating febrile phenomena in succession; first, generally or abstracted; and, secondly, in their relation to each form of the disease."

Fifteen lectures and an appendix are given — the latter being devoted to details of some illustrative cases, and the controverted question of identity or non-identity of fever poisons.

We regret that, amid so much to commend, we find it necessary to insist that some portions of his therapeutics are worthy of nothing but the severest reprehension. The day of blood-letting, emetics, and sedatives, such as tartar emetic (strongly recommended by this author), in the treatment of fever as such has gone by. Transatlantic prejudices are most forcibly illustrated on pages 208–9–10–11–12. Striking out these, and the book would infinitely better please American practitioners, who now believe in conservative, not in destructive medication. The analysis, which the author himself affords, of the principles of his treatment, is abundantly sufficient to overthrow the part referred to on the pages above noted. Why will not medical men listen to the mandates of physiological science, rather than be the blind servitors of mere traditional empiricism?

Books and Pamphlets Received.

Transactions of the American Dental Association. (Journal, page 614.)

This volume does great credit to the American Dental profession. It includes the proceedings at both the Chicago meeting in 1865, and that at Boston in 1866.

The welcoming address, by Dr. W. W. Allport, of this city, at the first meeting; the address on Specialties, by the late Prof. Daniel Brainard, were excellent at the time, and well worth preservation. Dr. Atkinson's report of the Committee on Pathology and Surgery, is also a paper deserving of the careful perusal of both medical men and dentists. General surgeons will also find much of interest in Dr. McQuillen's essay on "Dental Manipulation" (p 127). Among other valuable contents, the discussion upon Dental Physiology (p. 409), and that upon Dental Education (p. 482).

The volume, as a whole, does credit to our friends of the dental specialty, and we regret that the pressure upon the pages of the Journal does not now permit, what we long ago intended, copious extracts, or at least abstracts, from its many interesting and important pages.

EDITORIAL.

The somewhat extended absence of our Publisher from the city, and a similar, but temporary, journey of the Editor, must still be pleaded in extenuation of sins of omission on our part. We expect to be fully at rights soon, and meanwhile we chronicle, with pride, the fact that the monthly of old time has been transformed into a semi monthly, with abundant success. Only the editorial want of time has prevented its still further advance to hebdomadal issue — a thing which we still hope to accomplish within a brief period. A large number of valuable and interesting communications are on file for publication, for which our correspondents will accept thanks, and our patrons may look forward with pleasant anticipations.

To those of our subscribers who have cheered us by their friendly words and "material aid," we extend our sincerest thanks. To those few who leave us with the closing year, we send best wishes in their new avocations or associations. To the many who have sent us their names for the first time, we tender a hearty greeting, and promise to all renewed interest and a richer magazine of professional lore and experience, in the pages of the Journal for 1869.

Messrs Editors: Be kind enough to insert the following *errata* in your next Journal; they seem necessary to a correct knowledge of what was intended to be said in the recent article on Dystocia, written by

Your obedient servant, H. Webster Jones.

1. Last line of page 753, read for "votating," "rotating."
2. Fifth line from bottom of page 754, for "coincidentally" read "coincidently."
3. Fourth line from bottom of same page, for "secured" read "seemed," and omit comma.

CARROLL COUNTY MEDICAL SOCIETY.

Pursuant to a call circulated among the physicians, belonging to the Regular Profession of Medicine and Surgery, in Carroll County, a meeting was held in the First Baptist Church, in Lanark, on Tuesday, December 8th, 1868, for the purpose of organizing a County Medical Society, for a more thorough protection, both in and out of the profession, against the evils of Medical Empiricism; and to afford mutual assistance to each other in the amelioration of the sufferings of humanity.

Dr. J. L. Hostetter was chosen temporary Chairman of the meeting. The Constitution, By-Laws, and Rules of Order were then read, and on motion were adopted, as the basis for the government of the Society. The officers for the coming year were then elected, as follows:

President, Dr. John L. Hostetter, of Mount Carroll; Vice-President, Dr. J. B. Porter, of Lenark; Secretary and Treasurer, Dr. J. Haller, of Lanark.

The following named members were, by resolution, requested to read papers at the next meeting of the Society, to wit:

On the action of Chloroform as an Anæsthetic Agent,—Dr. N. Stephenson, of Thompson.

On the action of Veratrum Viride as an Arterial and Nervous Sedative, and to what extent in dose may it be safely administered,—Dr. D. M. Greely, of Mount Carroll.

On Fractures in general, both compound and simple,—Dr. B. P. Miller, of Mount Carroll.

On the action of Gelseminum Sempervirens,—Dr. J. Haller, of Lanark.

On the History, Rise, and Progress of Medicine,—D. J. B. Porter, of Lanark.

On Medical Ethics in general,—Dr. J. L. Hostetter, of Mount Carroll.

On motion, it was resolved that any member of the Press, and Clergymen, who are favorable to the "Regular System of Medicine," be allowed seats at the meetings of this Society.

On motion, it was ordered that the Secretary make out and forward a report of this to the CHICAGO MEDICAL JOURNAL and Medical Examiner, for publication.

There was a good attendance of the physicians of the county, and a most cordial feeling prevailed. After an interchange of views on different topics of medicine, the Society adjourned to meet in Lanark, on Monday, February 22, 1869, at 2 o'clock, P. M. J. HALLER, *Secretary.*

THE Adams County Medical Society, at its November meeting, adopted a revised fee bill, together with the following:

In cases where consultations have been had, or where two or more physicians have been in attendance, the physician having the case in charge shall embody in his bill the fees of the counsel or assistants, and account therefor to the same, paying the full amount or such proportion of the whole bill as may be collected.

I. *Resolved*, That the forgoing table of fees be adopted as the Fee Bill of this Society.

II. *Resolved*, That the virtuous and industrious poor shall be attended by the members of this Society as cheerfully as the rich, and for such compensation as they are able to make.

III. *Resolved*, That every member of this Society shall keep a record of all patrons who are able, but who neglect or refuse to pay for medical services, and report the name and residence of the same at every meeting; and that all such persons be afterwards required, by all the members, to pay for services in advance.

IV. *Resolved*, That our fees are due as soon as the services are rendered, and that all members of the Society shall make prompt collections, and give the community to underetand that we are entitled to the same consideration in this respect that is claimed by merchants, artizans and laborers.

V. *Resolved*, That this Fee Bill, and these Resolutions, with the names of all the member of the Society appended thereto, be printed in a suitable form, and that every member be required to have a copy of the same conspicuously placed in his office, that our patrons may be fully apprised of its contents and conditions.

VI. *Resolved*, That members who disregard this Fee Bill, and these Resolutions, shall be liable to the same penalties that are attached to a violation of the Code of Ethics.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JANUARY 15, 1869.—No. 2.

ORIGINAL COMMUNICATIONS.

Argentine Albuminuria.

BIOLOGICAL SOCIETY OF PARIS—M. CLAUDE BERNARD, PREST.

Observations upon certain effects of Nitrate of Silver employed as an internal remedy; by Henry Liouville, laureate, etc., etc.

In two communications made successively to the Biological Society in June, 1868, we endeavored to complete one of the reports of a case (of which we presented the pathological specimen) of disseminated sclerosis diagnosed during life by M. Vulpian, at la Salpetriere.

In this case was discussed the demonstration establishing clearly the long duration of certain effects of the impregnation of certain organs of the economy with nitrate of silver taken internally in pill form, and of certain serious consequences of this action which had not hitherto been noticed.

It is known by experiments and clinical researches (1), of which the last are especially due to MM. Ball, Charcot

(1) Dictionnaire encyclopedique, article *Argent*, par Ball and Charcot, 1867.

and Vulpian (2) *that nitrate of silver*, or at least the product of the decomposition that this agent undergoes in the pills is absorbed into the economy, and penetrates into the circulatory torrent (3). It is moreover known that chemical investigations, skillfully conducted by M. S. Cloëz, have directly proved this absorption, by permitting the collection by analysis, in the urine secreted in certain cases of disease under treatment at la Salpêtriére, of *silver even*, under the form of small metallic grains.

The actual case which we publish, whilst confirming these principal data, will shed perhaps some new light upon this interesting question of practical physiology.

The care referred to is that of a woman of thirty-four years, J. C. B——, who, during several years, manifesting the very characteristic phenomena of disseminated sclerosis (encephalic and spinal) was admitted in 1868, to No. 14 Salle St. Mathieu, in the infirmary of la Salpêtriére, service

---

(2) Charcot et Vulpian, *Emploi du nitrate d'argent dans l'atax ie locomotive.* Bulletin de Thérapeutique, 1862.

(3) The pills of nitrate of silver are made as well with bread crumb, as with powder of marsh-mallow, or with simple syrup. It is clear that in these pharmaceutical preparations a very large portion of the nitrate of silver is modified. Some investigations made by M. S. Cloëg upon freshly prepared pills, have demonstrated that four-fifths, at least, of the salt or silver is *decomposed*, and passes into an insoluble condition, principally under the form of oxyd of silver, and of metallic silver, and perhaps of insoluble salts of an organic acid.

As to the part which remains soluble, it it not even absolutely certain that it remains in the state of nitrate.

Moreover, after that, it is averred that the nitrate of silver undergoes, even in the pills, almost complete decomposition; but, from the point of view which we occupy, we attach to this result only secondary importance.

It is certain, in fact, that the silver has been absorbed in the cases of our patients; for, as we shall explain later, *we have assured ourselves of it by analysis of the urine.*

Charcot et Vulpian, *sur l'emploi du nitrate d'argent dans l'ataxie locomotrice.* Bulletin de Thérapeutique, 1862, p. 1. After this epoch (1862) M. Cloëz had in fact succeeded in extracting a metallic globule from an analysis of urine.

of M. Vulpian, and whose autopsy we have also made during the present year. The confirmatory specimens have been presented by us to the Biological and Anatomical Society (1).

Amongst the numerous medications to which this patient had been subjected, without final success, but always with some amelioration, was *nitrate of silver*.

She had been subjected to it during six years in the following manner:

On the second day of August, 1862, they began with two pills of nitrate of silver each day.

On the eighth of August, when there was manifested a slight amelioration, she was put upon three pills.

From the eighth of August, 1862, to the twentieth of April, 1863, she pursued the treatment with three pills per day.

This was continued nine months, or two hundred and seventy days. From which we may conclude that about seven hundred pills were taken, after which they were discontinued.

The pills, made with care, contained 0.01 centigramme of nitrate of silver; which amounted to about seven grammes, which were thus successively introduced.

Unfortunately the amelioration was temporary, and it became necessary to resort to other medicaments.

Many were employed without great success.

There was, however, no return to the nitrate of silver, and when we saw the patient upon her last appearance at the infirmary (April, 1868), she assured us that she had taken no nitrate of silver for five years. This was probably true.

We were struck by the tint, approaching to bistre, of the abdomen, and of the colored line relieved upon the edges of the gums. It should be stated that with us she had no further medication with silver in any form.

---

(1) See Bulletin de 1868, juin et juillet.

At the autopsy, we determined at once with M. Vulpian, under simple inspection, that the kidneys and the plexus choroides were considerably impregnated by the passages of the nitrate of silver.

Later, it was easy for us to establish that the supra-renal capsules also appeared to have undergone this influence.

The microscope and chemical analysis, as we shall indicate later, will complete the confirmation of all our preconceptions.

The kidneys, in fact, would exhibit after section a characteristic appearance. They were, as it were, studded, especially in the cortical substance, both superficial and intra-pyramidal, with little black, livid, isolated points presenting themselves under the form of a fine dust, with grains disseminated, but fixed, and imparting to a light and uniform touch the sensation of a beard recently shaved. These were the glomeruli of Malphigi, very apparent, stained by the metal, and appearing altogether and alone, as in the most successful anatomical preparation which we can make for their demonstration.

If prepared in the fresh state, this same appearance may be almost as perfectly recognized after four months of preservation in pure alcohol.

Under the microscope these may be positively determined to be the glomeruli of Malphigi.

It is indeed these, but these alone, which are stained. Their livid color slightly brownish, contrasting with the surrounding tissue. They were either stained in mass and uniformly, as by a blue or violet wash, or tinted in spots, and in addition, outside of the general discoloration, there were certain points, and little zones very clearly defined, of a bistre or sepia color, or nearly black. To us it was very plain in this case, that not only the surface, but even the texture of all or a portion of the glomeruli was affected; at times even the alteration seemed profound (1).

(1) This observation, confirmed moreover by another absolutely similar which we have recently made (September, 1868), in the case of a woman

None of the ducts have ever appeared to us to have undergone any great modification in their tint. In some places it seemed, indeed, that some masses were more deeply stained and tinted yellow.

But this could not be compared with the special and characteristic silvery tint of the glomeruli. On the other hand, what was more clear, and appeared to us of the greatest importance to note and to investigate with care, was the existence of numerous alterations, suggesting the granular-fatty lesions of the renal tubes affected with morbus Brightii.

Now there was in this nothing surprising, since, during life, the urine of our patient had, upon several occasions, after the exhibition of silver, yielded albumen to the tests of nitric acid and heat. It contained no sugar, but its density was 1040. Now it is interesting, I think, to compare this production of albumen and this renal lesion with the evident impregnation and the deep tinting of the glomeruli of Malphigi, consequent upon the treatment with nitrate of silver.

It is clear that there may thus be produced an *argentine albuminuria*, just as under other circumstances, almost identical, there is produced by another metal a *Saturnine albuminuria*. (*1*)

If observations of this kind should be confirmed, the practitioner should take them into serious consideration in the internal administration of silver. (2)

---

who took, during two years nitrate of silver, differs from what has been observed by the majority of authors, who have indicated up to this time that the tissue surrounding the glomeruli was alone colored, also: Frommann, Ein Fall argyria etcr., in Virchow's archives, 1859, t. xvii. Also: Ball et Charcot cite plus haut.

(1) Olivier, *De l'Albuminurie Saturnine.* Archives de Medecine, 1863.

(2) Later, in September, 1868, a new fact has likewise presented itself to our observation at la Salpetriére, but it is unfortunately incomplete as a clinical datum. A woman had, during two years, taken nitrate of silver repeatedly, in pill form, and at the autopsy we discovered plainly traces of

In every case, an examination of the urine of these patients ought always to be made carefully *before* and *during* this special treatment. It may serve to regulate it. For ourselves, we should make an absolute rule to suspend, or to diminish considerably, the metallic medication from the appearance in the urine of the smallest trace of albumen.

Before concluding what refers to the *kidney* itself, we should say that sections of the pyramids did not furnish us with so satisfactory evidences of argentine impregnation as those which resulted from the examination of the cortical substance, to which the most decided alterations seemed to be confined.

This same argentine impregnation of the *supra-renal capsules*, suspected by us when examined by the naked eye, was confirmed in a very clear manner by histological examination.

But here, also, it was in spots that the more deeply tinted points were distinguishable. There were zones of a dark ochre tint deepening to a sepia color. The cells participated in this tint, and appeared more or less intense.

The alcohol had preserved in them, after four months, this new property contracted by disease.

The tint, upon simple inspection of the plexus choroides, suggested that they also were involved. They were equally well preserved, thus colored in alcohol during four months. Their color was a deep yellow bistre, and it was likewise darker in spots; they were also blackish. Under the microscope they could be observed much better. The more deeply tinted points were perfectly well seen, like grains of sepia color.

It would have been regarded as a preparation of the plexus choroides made designedly with a solution of nitrate

---

impregnation with the metal of the kidneys (glomeruli), and the alterations of advanced morbus Brightii (granular fatty tubules); but it was impossible to recognize the results from a thorough examination of the urine during life.

We refer to this case solely from an anatomico-pathological point of view.

of silver, a reactive agent employed very successfully, as is well known, in histological investigations.

Our researches have likewise been extended to the lungs; but, although we thought that we recognized a slight tinting of the elements of this tissue—the difficulty being here increased from the possibility of confusion with the pigmentary matter so common and the condition termed carbonaceous—we will not decide as positively upon their argentine impregnation.

The other organs have not been examined by us in this connection. In no instance did they offer, upon simple inspection, anything perceptible.

We might, indeed, from the preceding limited examinations, be content to affirm the existence of the silver deposit, and its persistence in different organs of the economy. Proceeding to the examination with certain chemical reagents under the microscope, we may say that we have employed acetic acid, glycerine, alcohol, ammonia, hypochloride of lime, without inducing the least change in the color acquired by the parts tinted by the silver impregnation. But it was no longer so when we used *nitric acid*, and especially *cyanide of potassium*. Both of these, but in different different degrees—the greatest effect resulting from the cyanide of potassium—decolorized completely the glomeruli, and gave a general uniform amber-yellow tint to the preparation where previously the isolated silver tints had appeared so conspicuously. (*)

Finally, a new investigation, more decisive, perhaps, and certainly more delicate, has yet again furnished to us a new element of certainty.

From the data of M. Vulpian, M. Cloëz determined once more to attempt the detection of the silver itself.

(*) MM. Ball and Charcot, who had already made the same observations with reference to the majority of these reagents, have hence drawn the conclusion that this solubility of the blackish granules demonstrated that they consisted of an *albuminate of silver*, and not of a *chloride* (*Dictionnaire Encyclopedique*, article *Argent*, deja cité).

In this instance it was not from the urine, but from the kidney itself, that this distinguished chemist was enabled to extract, by the process of cupellation, a portion of the metal itself, which, at the termination of the experiment, appeared in the form of a little granule, so that we were enabled to present to the Biological Society, extracted from the half of a kidney, *a globule of metallic silver* of the size of a small pin's head, resistant, relatively heavy, almost round, and of characteristic lustre.

The experiment was thus altogether complete and perfect.

We shall not insist upon the interesting consequences which may be deduced from this rare case, since we find related only the case of *Guens*, as susceptible, in some respects, of comparison. (*)

The case was that of an epileptic, who for sixteen years had discontinued the use of nitrate of silver, and at whose autopsy traces of impregnation with the metal were found in various tissues. In our case, the treatment had been discontinued but for five years.

But these new facts should be specially noted, that it was the texture of the glomeruli of Malphigi, and not *the surrounding tissue alone*, which was impregnated ; that there were present the lesions characteristic of Bright's disease, apparent in the profound alterations of glomeruli due to medication (*argentine albuminuria*) ; that the supra-renal capsules were impregnated ; and finally, that it was possible, having established the actual facts by ocular demonstration and by microscopic examination, to separate chemically, under the form of the argent itself, the incontestable proof of the physical and physiological action. Legal medicine, as well as therapeutics, may deduce from this data of the highest practical interest. W. H.

(*) Van Guens (Donders d'Utrecht), Archiv. fur die Hollandischen Beitrage zur Natur und Heilkunde. Berlin, 1857.

Solution of Nitro-Sulphate of Iron.

BY Z. C. MCELROY, M. D., ZANESVILLE, OHIO, PRESIDENT MUSKINGUM COUNTY, OHIO, MEDICAL SOCIETY.

The formidable list of preparations of iron in our national pharmacopœia, would seem to forbid the idea that the whole ground was not most fully covered; and that any addition must have very conclusive reasons for its recognition by the profession. Notwithstanding their number, however, the manufacture of preparations not recognized by the pharmacopœia, on a very large scale, by various commercial houses, is a well known fact; as is, also, another fact, to-wit: that they are largely used by the professions. That they supply a want may as well be admitted as a still further fact. No doubt various causes contribute to these ends; but a main one certainly is, their pharmaceutical elegance, and agreeable sensible properties. The elixirs of calisaya and iron, and with bismuth, must be known to all who take and read medical periodicals; and any defect in their mode of making them known, would be compensated for by the active, polite, and vigilant commercial agents of the houses engaged in their manufacture.

Recognizing in iron a therapeutic agent of the very highest importance, it has often seemed to me that some form, which could be readily put up extemporaneously, having the elegance and agreeable sensible properties of the popular elixirs, was still a desideratum to the general practitioner, if only for the sake of knowing precisely what he was prescribing.

A personal and professional friend of the writer, Dr. J. R. Black, of Newark, Ohio, communicated to the *Cincinnati Lancet and Observer*, for March, 1868, a formula for the preparation of what he continued to call, probably because it was the name by which he received it, "Liquid oxysulphate of iron." It is as follows:

℞. Ferri Sulph: ℥ ij:
Acid Nitric: j ℥ iij;
Aqua Distill: ℥ iss;

Rub the sulphate with the acid in a mortar, gradually add the water after the sulphate is all dissolved, and filter through paper. Dose from 7 to 12 drops in water or quassia infusion.

Though this is given verbatim, as reported by Dr. Black, a very slight examination suffices to discover its want of scientific exactness. There is no quantity indicated at the close of the process. No statement as to the quality of either the sulphate of iron or nitric acid. It seems to me that these should be *pure*, not *commercial*, and that at the end of the process there should be one and one-half ounces of the solution; even if it falls short, distilled water should be passed through the filter until that quantity is obtained. If in excess, evaporate on sand bath.

The writer is not quite chemist enough to state precisely what changes occur on the addition of the acid to the sulphate. Large volumes of nitric oxide, becoming, probably, hyponitric acid by contact with the atmosphere are liberated. It is probably a tersulphate, with considerable free nitric acid in the resulting solution. Its color is very different from the tersulphate of the pharmacopœia. So that it must be that and something else; and that something else, most likely, free acid and water. After passing through the filter the solution is a very beautiful pale amber color, and seems to be quite stable, as a sample was examined this very morning at an apothecary's, more than a month old, which showed neither precipitate or change in any way. Its chemical formula is probably that for per sulphate of iron, plus nitric acid and water, and might be written in chemical symbols as follows: $Fe_2\ O_3 . 3\ S\ O_3 + N\ O_3 + H\ O$. It mixes freely in all proportions with water, spirits and simple syrup, without altering its beautiful color. Its incompatibles are tannin, gallic and malic acids. The point of most practical importance to the general practitioner is, that here is an acid salt of iron in solution, which, in extemporaneous prescriptions, without incompatibles, rivals in pharmaceutical elegance, and pleasant taste

any of the commercial elixirs of calisaya, iron and bismuth. Sulphate of quinia may be added in any proportion, instantly dissolving, thus forming a suitable elixir of calisaya and iron, without change of color, but acquiring the bitter taste of quinia in proportion to the quantity added.

Now suppose an elegant acid iron preparation be desired, let the following formula serve as a basis, for an indefinite number of variations:

℞. Cinnamon water, f ʒ v;
Simple syrup, f ʒ ij;
Diluted alcohol, ʒ j;
Sol. Nitro-sulphate of Iron, ʒ iij;
Dose, a teaspoonful for an adult.

Brandy and whisky both discolor the mixture, as do most of the aromatic tinctures. The aroma must come from the volatile oils, either through the alcohol, or pure white spirits or water. To preserve its elegance it is only needful to remember that nothing containing tannin, etc., can be added without darkening the color, though where this is not objectionable, the most valuable part of the sensible properties, to-wit: pleasant taste is preserved. It is a gratifying fact that this preparation is seldom indicated in connection with its incompatibles. The indications for acid preparations of iron are usually sharply defined. Broadly viewing the *modus oporandi* of organic life in the human body, it is seen that in the construction of its various tissues, textures and organs, out of other organic material, the acid elements predominate; without acids there can be no digestion in the human stomach, for it is in truth an acid alembic The mission of alkalies, and the salts they form with most acids is to arrest construction, and to break down and remove effete matter from the system.

For diseases characterized by great waste or destruction of tissue, the mixture of the chloride of iron, an acid preparation of the pharmacopœia, has been found a very valuable remedy. Why? Because it is an acid preparation of

iron, and acids, better than any other preparation, stay the processes of destruction and promote those of repair. That is just why large doses of the common tincture of iron are is not so urgent, as in anæmic and chlerotic conditions, so efficacious in erysipelas and diphtheria. When the waste iron in combination with organic acids; or pure, as in the ferrum reductum; or neutral, as in the precipitated carbonate, are very appropriate, and very highly useful, but will disappoint if relied on to stay rapid wasting. These generalizations being conceded, and they are original with the writer, it necessarily follows that in children debilitated by bowel complaint, the solution of the nitro-sulphate of iron fulfils all the indications needful to recovery with elegance and agreeable pharmacy. So, too, it would be appropriate in adults debilitated by excessive discharges from the skin, bowels or lungs; no better, perhaps, than the common Tinct. Ferr. Chlor., but far more elegant and pleasant to the taste, and, therefore, in many cases, more likely to be taken, which, are after all very weighty considerations in highly civilized life, whether in city or country. It is considered an imperative duty on myself to present medicines in their most agreeable forms to those who seek my professional counsels.

It can readily be seen, then, that while the number of preparations of iron is very large, this acid sulphate fulfills certain indications, better than any one of the long list, and from its cheapness, elegance and efficiency, has its own place among them.

Before me stand some "physicians' sample packages," placed on my table by a very polite agent of the manufacturers, of what they call "Elixir of Calisaya Bark and Iron," and the same with "bismuth," whose pharmacy is all that could be desired. Each package has a printed formula of its contents. Some of the ingredients, as for instance, brandy and whisky, contain tannin, and yet the solutions are beautifully clear and pleasant to the taste. Now, these formulas cannot by any possibility represent truthfully the

contents of these "sample packages," for, if brandy or whisky are added to any of the pale solutions of iron, the color is quickly changed to some more or less dark tint. And as these formulas are clearly not indicative of the contents of these packages, none but those in the secret of their manufacture can tell precisely what they do contain, save that some aromatic spirits, sugar and iron are present; but of how much of each, and the mode of preparation, we are left entirely in the dark. Not so, however, withthe extemporaneous preparations of the acid sulphate, for apothecaries will put up what the physician's prescription calls for, and hence, when thus written for, the physician has a definite knowledge of what the patient is to take.

After trial, others, like myself, will thank Dr. Black for communicating the formula to the profession, even though it is wanting in scientific exactness. To supply, to some extent, at least, this defect is the object of this paper. It has been used by the writer a great many times, and with very satisfactory results ; for the reason that patients, both adults and children, will take pleasant medicine regularly, when they are very apt to forget it or postpone it, if it is unpleasant to the taste, perhaps, more particularly in chronic cases.

A Case of Aconite Poisoning.

BY JOHN W. HENLEY, M. D., YATES CITY, KNOX CO., ILLS.

Editor Chicago Medical Journal:

Aconite is becoming so extensively used by the medical profession, both as an internal and external remedy; and being a powerful acro-narcotic poison, for which there is known no direct antidote, the following may interest many readers of THE JOURNAL.

Dec. 31st ult., was called in great haste to visit Mrs. Varney, five miles from town. She had been confined two

days previous, and was directed to take one tablespoonful of castor oil on third day after accouchement. I had sent by her husband the following mixture, for a neighbor woman, to be used as a liniment for neuralgia of the face:

R. Tinc. Aconit, rad. f ℥ jss:
Chloroformi.
Spts. Rectificat, aa f ℥ j;
Oil Oliv. ℥ j;
Misce.

Of which one table-spoon was administered to Mrs. V. for castor oil. I arrived at the scene of confusion in about two hours and a half after the poison had been swallowed. Found that she had been induced to swallow two large tablespoonfuls of castor oil immediately after the mistake was discovered. She was suffering no acute pain, and what is a little strange, there was no gastric iritation, had been no vomiting, nor the slightest nausea. There was considerable depression of nervous energy, a pricking and benumbing sensation in mouth, throat and limbs, with a sense of fullness all over the body. The most disagreeable sensations she complained of, were a coldness about the stomach, and the unnatural and large feeling of the limbs. The pulse were 80 and rather full, respiration free and easy. The surface of the body was but very little colder than natural. The sense of taste was entirely wanting. After a hasty survey of the condition of the case, I gave two teaspoonfuls of ground mustard in warm water, with a view of producing speedy emesis. She neither tasted the mustard, which was fresh ground, nor felt the slightest effect of it in the stomach. After waiting some 15 minutes I gave nearly one drachm ipecac, in two doses, following with copious draughts of warm water, sweetened. In a short time she vomited freely, which was followed by free evacuations of the bowels. All the time the above emetics were being administered the limbs were rubbed with stimulating lotions, which afforded much relief, as the friction

destroyed in part the disagreeable tingling and sense of fulness. The patient now began to feel a great sense of depression. The pulse were weak and down to 48. Extremities cold. In short, there seemed to be a great tendency to death by asthenia. Gave whisky sling, with ginger, freely and repeatedly. In one hour the patient was bathed in a copious perspiration, and began to revive. In two hours more I left her safe. The only inconvenience she experienced afterward was the profuse perspiration and consequent prostration, which lasted about forty-eight hours.

The dose of strong fine aconite root was undoubtedly a fatal one if it had been administered alone. And what was there in the combination which served at least as a partial antidote? It could not have been the alcohol, for there was not a sufficient quantity to even afford temporary safety. Neither could it have been the olive oil, for there was scarcely a half drachm in the quantity given. But the olive oil contained in the mixture, and the castor oil given immediately after the poison was swallowed no doubt served in part to mitigate the acrid properties of the aconite. And there is no doubt in my mind but the chloroform was the agent in the mixture which saved the patient until other means were applied to eliminate the poison. For the effects of the aconite and chloroform being opposite, the one tends to counteract the effects of the other. And since my experience with this case I feel confident that the best remedies for poisoning from aconite, are, aside from evacuating the stomach by active emetics or stomach pumps, oils to counteract the acrid properties of the drug, and powerful stimulants to prevent the depression of nervous energy and brain. Among the latter let me suggest as paramount, chloroform, with the yolk of an egg, and water, to be given according to the amount of depression.

The suggestions here made, and facts gained in the treatment of poisoning by aconite may with equal propriety prove efficient in destroying the dangerous effects of an over-dose

of the Gelsiminum Sempervirens. And I would suggest to Dr. Hani, of Indiana, who reports a case of fatal poisoning by this drug, in Dec. 1st number of THE JOURNAL, that he waste not valuable time in administering opium and strychnia as antidotes to this poison, but use more direct stimulants as soon as practicable, and thereby sustain the vital powers until the narcotic has spent its force.

Electricity: Its Use in Hysteria.

BY JAMES T. NEWMAN, M. D., CHICAGO.

Was called upon the 1st inst., at half-past nine in the evening, to see a young woman who was suffering with hysteria. The paroxysm had been brought on by excessive grief. Ordered her to have a warm foot bath, after which she was put in bed. It was hardly of any use, because two strong men could with difficulty control her raving, yet she was small and very frail. The fits would come on every five or ten minutes, and last equally as long. Prescribed the following:

℞.	Assafœtidae	ʒj; (rub well, add)
	Aqua Mentha pip.	℥ vi;
	Tinct. Valerianae Am noniæ	ʒ ii;
	" Castorei	ʒ iii;
	Ætheris Sulphurici	ʒj;

M. Sig. A teaspoonful hourly during the night.

Visited her in the morning; found her no better than when seen last, the only difference was that the spasms were longer going on and coming off. Ordered an enema of Assafœtida with mucilage acacia. Prescribed at the same time:

R. Zinci Valerianatis, gr. xii;
Potassii Bromidi, gr. xx;
Misce fiant in chart. iv;
Sig. One every four hours.

January the 2d, at four o'clock in the evening, saw her again; found her frothing at the mouth, and evidently worse. She had taken a small quantity of soup at noon, the only nourishment received since taken. I knew she could not long withstand such powerful straining and jerking of the limbs, and my faith was so strong in the nervous sedatives, that I resolved on repeating the powders, with the exception of adding morphiæ and changing quantities, as follows:

℞. Zinci Valerianatis, gr. xx;
Potassii Bromid, gr. xii;
Morphiæ Sulphatis, gr. iv;
Misce fiant in chart., No. vi;
Sig. One every two hours.

She went to sleep at midnight and rested quietly all night, when all at once the paroxysms broke forth with redoubled fury; the rest she obtained seemed only to increase their power. Ordered her to have some beef tea instead of water when she wanted to drink. There she lay raving and tossing like a maniac; medicine seemed of no use. I determined to change my course of treatment. I thought of electricity, and acted on the impression. Took the electro-magnetic battery and placed one of the poles to the occiput and the other to sacrum; the effect was instantaneous, the rigidity of the muscles gave way. She soon went to sleep, and had no more paroxysms that day. In the morning, January 4th, I made another application, and to use her own words, she said it gave her strength and cheerfulness. She recovered rapidly, and soon went about her work as usual.

Case 2d, Jan. 9th, 1869.—Was called to see a married woman aged 36 years. The poor woman had suffered both mentally and physically at the hands of her cruel husband, and to cap the climax of his meanness he had sold all the little treasures given her by her mother. Pardon me for taking up so much space, I will now come to the case.

Found her laboring under an attack of hysteria, frothing at the mouth, twitching and jerking of the limbs. I resolved to give the electro-magnetic battery another trial, which I did, and to my great pleasure the effect was magical. She has not had any more paroxysms since I first used the battery. By the way, I neglected to say that she had the spells about a week before I was called. I have just left her house, and she says that she feels better than she has felt for a long time. In recording this case I have come to the conclusion, that much good may result from the use of electricity as a therapeutic agent, but we must not expect too much from it, for the simple reason that we have no specifics.

Remarks on the Prunus Virginiana, Particularly the Wine and Ferrated Wine of Wild Cherry.

BY X. TONER, M.D., ALBANY, NEW YORK.

The medicinal bark of the Prunus Virginiana is the inner bark of the Cerasus Serolina, or Wild Cherry, a large tree indigenous in the United States. The bark may be obtained from the root, trunk, or branches of the tree—that of the root is preferred by many. Deprived of its epidermis, it is of a reddish-yellow color, brittle, and easily pulverized. When fresh, it has the smell of peach leaves or bitter almonds. Its taste is bitter, astringent, and somewhat aromatic. Its active principles are tannic acid and amygdalin. In the process of distillation traces of hydrocyanic acid have been discovered.

The *physiological action* of the wild cherry is two-fold, viz: that of a stimulant or tonic to the digestive function, and, by reason of its amygdalin, as a direct sedative to the nervous system, and through that upon the circulation. *Dr. Eberle* states that under the influence of copious draughts of the infusion (℥ i—Oij), continuously kept up, the

pulse fell from seventy-five to fifty per minute ; but immediately upon the suspension of the draughts of the infusion the pulse returns to its normal condition.

In regard to its *therapeutical* action there is very general agreement among all who have used it to any considerable extent. Few remedies, in fact, have had a more happy fortune in this respect. We quote, as expressing very happily the well-nigh unanimous opinion of the profession, from Professor Wood, in relation to the crude article or the domestic infusion :

" The joint tonic and sedative properties of this bark admirably adapt it to the treatment of cases of general debility, with enfeebled digestion, an irritable state of the nervous system, and excessive frequency of pulse. Long before its chemical peculiarities were discovered, experience had established this application of the remedy. In the treatment of *pulmonary consumption* it has for many years been a favorite in this country, and, before cod-liver oil came into notice, was probably more relied on than any other single medicine. It was employed not only in the advanced stages, when *hectic fever* had set in, but from the beginning, and often as a preventive, in cases where a strong tendency to the disease seemed to be displayed. It was given with a view of imparting tone to the digestive organs and system generally, and thereby modifying the tuberculous diathesis, and was preferred to other tonics because it was thought to produce these effects with less danger of undue excitement. Now that it is known to be positively sedative to the heart, and to the nervous system, we can better understand its usefulness in that complaint. In other forms of *scrofulous disease*, presenting a similar complication of debility of the digestive and nutritive functions, with frequency of the pulse, it is equally indicated. Few remedies are better adapted to *hectic fever*, from whatever source it may proceed. In the debility of *convalescence from fevers* and other acute diseases, when attended, as it often is, with night sweats, a frequent pulse,

and sleeplessness, restlessness, or other functional nervous disorder, the wild cherry bark is also an excellent remedy."

The various preparations of wild cherry, in so far as they are efficacious, act by virtue of the same principle; but certain of them, as we shall presently see, have been so prepared as to unite the virtues of the wild cherry with the specific properties in a very useful manner. They are chiefly beneficial in debility, and convalescence from acute diseases, uniting, as they do, with a tonic power the property of quieting irritation and diminishing nervous excitability. Their use is indicated in all cases requiring a general tonic, particularly the impairment of the constitution by dyspepsia, debility resulting from inflammatory fevers, and in those cases where the digestive powers are impaired with general or local irritation existing at the same time. Also, owing to their slightly astringent properties, they are beneficial in the summer complaints.

They have not the power to interrupt the paroxysms of intermittent fever, but they can assist to keep off the paroxysms when once they are broken up, and when it is evidently injurious to continue the quinia.

In speaking of the remedies for chlorosis, Dr. J. Bates writes, concerning the excellent and delightful preparations of *Messrs. Tilden & Co.:*

"The *wine* of wild cherry is a very excellent preparation, and should be administered in connection with other remedies usually given in this malady. The wine, if scientifically prepared, will be found advantageous in this complaint, even when given alone. It may be used in doses of a dram to half a wine-glass three or four times a day. Undoubtedly the best preparation of this agent for the treatment of chlorosis is the *ferrated wine* of wild cherry. Diseases of this class, uncomplicated, will in most instances be signally relieved by this valuable combination. By uniting the hæmatinic and tonic properties of iron with the sedative and tonic properties of the prunus, in the ferrated wine of wild cherry, a happy union of medical properties is accom-

plished, which renders it more useful in a great variety of atonic diseases, and far more efficient than the same agents would be if administered separately."

But it is not alone in chlorosis that the value of these preparations we are speaking of is exhibited. In all diseases where there is a reduction of the red globules of the blood, especially in anæmia, the *ferrated wine of wild cherry* will be found to prove its success.

Dr. Flint, in speaking in reference to the therapeutics of the anæmia of *tuberculosis*, *Bright's disease*, *&c.*, writes:

"When it is the chief condition to be met therapeutically, the first points are to remove, if practicable, the cause or causes on which it depends. The next point is to employ measures to restore the normal quantity of red globules. * * * * *First*, a nutritious alimentation. * * * * *Second*, the use of tonics and stimulants. * * * * *Third*, iron as a special remedy. * * * * *Fourth*, a regimen calculated to increase the energy of the assimilative functions." * * * *

To meet the second and third points, there is no better tonic and stimulant preparation than the *ferrated wine* of wild cherry, given in doses from one to four drams three times a day.

This *ferrated wine* of wild cherry I regard as an *exceedingly valuable preparation*, since it so *happily* and *perfectly* unites the blood-restoring iron with general tonic and nervous sedative effects. We have prescribed it in a large number of cases where the nervous system was prostrated, and for the legionic symptoms concomitant of general debility, and have been extremely gratified by its prompt and efficient action. In fact, we have found no one of the general vaunted remedies *superior*, or even of *equal* efficiency to it to combat such morbid conditions.

The *ferrated wine of wild cherry*, as extemporized from the fluid extract, we have found from observation is *vastly inferior* to that scientifically prepared by the firm of Tilden & Co., both in its physical appearance and therapeutical

action. Already have we seen it in market spuriously prepared, which is having its evil tendencies, and must inevitably result in throwing into disfavor the *honest article.* It is unfortunate that there is scarcely a medicinal preparation which professes any marked advantages, placed in the hands of the physician, before competition goes to work todestroy its efficacy by means too palpable to require enumeration here.

Dr. Allbut (in Braithwaite's Retrospect, part 55, page 258,) speaks very highly of the wild cherry. He says, "I have found the wild cherry useful not only in cases of cardiac disturbance, but also of general nervous excitability, of atonic dyspepsia, and of intestinal irritability. It seems, however, to have a more special bearing upon the arterial nervo-muscular tissues, as digitalis also has, and in proper cases it comes as a valuable substitute for digitalis when this medium is ill borne." Dr. A. declares that the bark of the wild cherry in doses under one dram of the tincture and under one ounce of the infusion does not nauseate, as do *opium*, *digitalis*, *conium*, and other sedatives, though, indeed, it will not take the place of digitalis in extreme cases."

Dr. Eberle, in speaking of the medicinal value of the wild cherry bark, says, "It lessens the frequency, tension, and irritated state of the pulse, moderates the cough and profuse nocturnal perspirations, checks the diarrhœa, and sustains the general strength of the system.

In *amenorrhœa* the combination of the ferrated wine of wild cherry and stramonium has proved valuable.

In *pertussis* the fluid extract of belladonna, with the syrup of wild cherry, has been serviceable in some cases.

After all, what we claim especially for the *wine*, and *ferrated wine* of wild cherry is, not that they are specifics in any one disease, but that these preparations can benefit, and have benefited patients suffering from *tuberculous consumption*, *chlorosis*, *anæmia*, *dyspepsia*, *debility* arising from various causes, *convalescence* from acute fevers, etc., etc.

They have, in addition, the merit of being very palatable, a point not always sufficiently regarded.

A medicine is none the less efficacious certainly because it has a pleasant taste. When we can *conciliate* the palate at the same time we are attacking a disease, we shall be quite as speedily successful in our efforts. Certainly, with children and fastidious invalids who have been compelled to *dose* largely, it is a merit to bring a medicine that shall be pleasant to take, and potential as a remedy.

PROCEEDINGS OF SOCIETIES.

Our thanks are due to the secretary, H. P. Strong, M. D., for the manuscript advance copy of the proceedings of the

WISCONSIN STATE MEDICAL SOCIETY.

The society convened at Madison, June 10, 1868, Dr. H. Van Dusan, president, in the chair, and Dr. A. J. Ward, secretary, *pro tem.* After formal business, reception of new members, etc., discussion occurred with reference to issuance of diplomas by the society; with regard to examinations for life insurance; services as experts in the courts, etc., etc.

Dr. Cody reported a case of fracture of the ribs, the interesting point of the case being the emphysema that ensued, it having extended over the whole body. There was also a large amount of hæmorrhage of the lung.

Dr. Whiting spoke of the danger of fracture of the ribs, and did not believe that in half the cases reported there was any fracture.

Dr. Taggart thought the danger depended upon displacement of the bone.

Dr. Barrett said he had known of ten or twelve cases that had been reported in his town, and he did not know of but two of the cases that were really fractured.

Dr. Brown offered the following resolution, which was adopted:

Resolved, That in explanation of the action of the society heretofore, upon the subject of admission to membership, the following conditions are required: The applicant shall present to the Board of Censors a diploma

from a regular organized school of medicine of good repute, or a certificate or diploma of membership in a county or district society, accompanied with a certificate of six years practice, and of good moral and professional character, or he shall submit to such an examination as the Censors may impose.

Dr. Ward asked leave to present a patient to the society for opinion as to the nature of the disease, which was granted, and an examination made by some of the members of the association present. The patient was a lady of about 30 years of age. After confinement, sometime since, she left her bed rather too early, and was attacked with roaring in the right side of the head. This is constant and very annoying. Instant relief is obtained by pressure upon the common carotid artery, and remains so long as the pressure continues. This is the only means by which relief is afforded. There was a diversity of opinion as to the nature of the difficulty, and no definite conclusion obtained.

Dr. Marks, chairman of committee on surgery, made a report, at length, on treatment of fractures of the thigh. The report goes on to prove, by the best authority, that oblique fractures of the femur in adults nearly always results in more or less shortening. He also proved that the majority of surgeons prefer the straight position in treatment of these fractures, and goes on to say that, "where there is displacement of the fragments, the points of bone must be in contact with the soft parts, and that any unnecessary handling or twisting of the limb inflicts injury upon the muscles and other tissues, which taxes nature to repair. Gentleness is not incompatible with good surgery, although there are men who, judging from their method of manipulation, would differ with me. Those claiming to be good surgeons often inflict an amount of unnecessary injury to the soft parts, in their examinations, that takes nature weeks, I might say months, to repair." The treatment he has adopted and prefers, is to use extension by means of adhesive plaster applied to the leg, terminating below the foot, to which is attached a weight running over a pulley, varying in size from eight to twento pounds in adult cases. A sand bag is placed on each side of the limb, and the foot of the bedstead elevated three or four inches, the weight of the body being the counter extension. When the fracture occurs below the lesser trochanter he applies pasteboard splints the whole length of the limb upon either side, using the extension as before indicated.

The advantages claimed for this method are: First, ease and comfort to the patient. Second, the dressing does not interfere in the least with the circulation in the limb. Thirdly, the limb can be seen at all times, and in case of compound fracture the wound can be dressed as often as desirable. Fourthly, the limb can be dressed and placed in position in one-fourth the time required to apply the splint and roller. Fifthly, "I claim better results from this method than from any other I have ever tried, though I don't pretend that it will always prevent shortening."

In fractures within the capsule, or partly within, he uses only sand-bags with the weight and pulley, as before alluded to. Dr. Marks gave a history of several cases treated in this manner, and the results warrant a general trial.

Dr. Mason, of Prairie du Chien, was called upon to give the result of his experience in the treatment of fractures without splints. He made a statement that he had treated fractures of the femur and tibia by the use of sand-bags and the weight with good success, and had also used the same treatment for synovitis with good results.

Dr. Marks reported at the previous meeting a case of aneurism of the subclavican artery then under treatment, and for which he had amputated at the shoulder joint. The patient recently died, and he presented a full written report of the case, with a statement of the appearance of the tumor after death.

Dr. McKennan, of Sauk City, presented a written report of a case of shoulder presentation, when the uterus was ruptured during the act of version. The child was immediately delivered and the mother recovered.

He also presented the written report of another case, where the woman was very short of stature, but stout and robust, and had a deformity of the pelvis from an undue prominence of the promontory of the sacrum. Antero-posterior diameter less than three inches. She had borne twelve children, nine of which had been delivered with instruments, and were dead. The tenth, eleventh and twelfth were very small, and were born without instrumental aid. He was called to her in her thirteenth confinement, and found the pains strong and the head presenting and pressing strongly against and partially engaged in the brim of the pelvis, and so it remained for

twelve hours. The doctor then turned the child and delivered by the feet, considerable force being required to extricate the head. The child was alive, and weighed some ounces over thirteen pounds.

The report of this case gave rise to some discussion as to the practicability of turning in such cases, some apprehending that in most cases the head could not be extricated.

Dr. Dalton, of Mineral Point, made an extended report of a case of aneurism of the axillary artery, which terminated in death. The patient presented himself with a large pulsating tumor in the left axilla, a small part presenting above and within the acromial articulation of the clavicle, the scapula considerably elevated, a pain at times in the left arm, with considerable swelling, and at all times a numbness, or as he expressed it, "a dead feeling extending to the ends of his fingers." He goes on to give a history of the case from the first appearance of the tumor. Told the patient the only remedy was ligation, and that the result would probably be fatal under any method of treatment. He decided to have the operation performed, and Dr. Dalton tied the left subclavican artery at the outer margin of the external scalenas, following the form of incision introduced by J. Kearney Rodgers. The operation was followed by sensible diminution in the size of the tumor and coldness of the whole surface of the arm. Case did well up to the twenty-fourth day, when the ligatures came away followed by slight hæmorrhage. Incision had entirely healed, except that portion about the ligatures, warmth nearly restored, and tumefaction almost disappeared. The case went on until the incision entirely healed, and in six days he was discharged as cured.

The operation was performed in November, and on the 9th day of March following he felt pain in the back and right shoulder, and on the night of the 10th he suddenly expired. Dr. Dalton closes his report, which is given in detail, as follows:

"I requested a *post mortem*, but could not prevail upon them to grant it. Therefore of what he died I am wholly ignorant, but from their description came to the conclusion that it might have been angina pectoris. They stated he had been suffering as usual with the pain, when he suddenly threw his right hand to his left side, screamed with pain, turning himself partially over he became easier, but

his ease was of short duration. In from three to five minutes he acted in the same manner and expired.

"Whether this could in any way be connected with the aneurism, or operation, is a question I leave to the profession to decide."

Dr. Ferrin, of the committee on practical medicine, made a verbal report of an anomalous case of pain and irritability of the urethra.

The subject of puerperal convulsions having been incidentally brought up, a very general and animated discussion upon the pathology and treatment followed. President Van Dusen left the chair and participated in his usual pointed and energetic style. He was full of the subject. Being an elderly gentleman of large experience and close powers of observation, he was considered good authority upon this subject. His opinion was, that it usually occurred in persons of full or plethoric habit, and bleeding was the remedy. Such had been his practice, and he had never lost a case. He had but little faith in anæsthetics without bleeding, and such appeared to be the general opinion.

President Chadbourne, of the State University, appeared and was introduced by President Van Dusen. He gave some practical remarks upon the duties and requirements of the medical profession. He introduced the subject of establishing a medical school within the State under the law creating the university, and said, as one of the members of the committee appointed by the Regents to take into consideration the practicability of a school to be established at Milwaukee or elsewhere, he felt desirous to advance the project, but he felt that the initiative should be taken by the State Medical Society, as it must in a great measure depend upon it for its support and direction, and he hoped that the society would take action upon this when it seems to be desirable to organize such a school.

The subject of treatment of rheumatism was under discussion for sometime, and the majority seemed to favor alkalies as the most efficacious remedies.

On motion of Dr. Marks, Dr. Taggart was requested to furnish a written report of a case of spontaneous rupture of the *sphincter ani*, also that Dr. McKennan be requested to furnish a written report of his treatment of fracture of the malar bone, and Dr. Cody of a case of emphysema.

After appointment of committees and ordinary business, the society adjourned to meet on the 3d Wednesday of June next, at Madison.

EDITORIAL.

Medical Legislation.—Protection.

If the assembled wisdom of the State Legislature pass any bills for the regulation of the practice of medicine and surgery in this Commonwealth, we trust they will not assume that it is in any sense for the protection or advantage of the scientific medical profession. Educated medical men do not ask for protection—they need no bolstering up, or the application of legislative splints or bandages. If such a bill as is contemplated becomes a law, we shall expect it to be considered as testimony that the people of the State can not take care of themselves. Accordingly to all precedent, such legislation has been considered a matter of persecution and intolerance by the classes at whom its penalties are aimed, and the people will not be slow to manifest their sympathies with the poor persecuted objects. We are sure that this will be the result. The question involved will enter into every bar-room caucus and every swindling political convention. The severer the penalty, the more certain and profound the reaction.

There is not in history an instance of more sublime self-abnegation than is now presented in the spectacle of a great, learned and powerful profession voluntarily tendering its control to a single political officer. Can there be a more illustrious exhibition of the magnanimity which characterizes the Medical Profession?

We have no doubt his present Excellency of Illinois will discharge the duty of supreme arbiter of medical matters in this State excellently well, and we will not permit ourselves to tear away the veil which as yet conceals the name and attributes of his illustrious successor.

It is humbly hoped that if a king is given to the Æsculapian realm, he will prove neither King Log nor King Stork—but meanwhile: WHO SHALL GUARD THE SHEPHERD?

Rush Medical College

Puts forth its annual announcement of the Spring Course of Instruction for 1869 in the present number of THE JOURNAL.

Every student of medicine is urged to consider the advantages to him of remaining in the city during the spring and summer, when the best opportunities are afforded for successful study. The hospitals and dispensaries are then overrunning with material illustrative of disease, and the student may have these facilities at a comparatively trivial expense.

He needs access to libraries and reading rooms; and, above all, he needs to become familiar with earnest men in the profession, that his character may be stamped by the example of their industry and habits of attention. He needs a text book, daily and hourly illustrated in the street; the class-room, the laboratory; the *clinique*, the hospital ward, and the dead-house, and the active rivalry of assso-ciates—a sure road to excellence.

The design of the course is that it may supply the want of a numerous body of students who must pass the time more or less unprofitably while removed from the best appliances during a long vacation. The majority of medical students in the North-west do not need to be reminded of the value of time or money. A year given to close observation under the tutelage of the college will insure practical ability with the prospect of immediate reward. The College offers to become Preceptor as well as *Alma Mater* that the highest luster may be given its *Alumni*.

FOREIGN ITEMS.

[FROM LA GAZETTE MÉDICAL.]

M. Claude Bernard has recently performed some interesting experiments in illustration of pathogenesis. He injected into the veins of rabbits, amygdaline or emulsine separately; the animals appeared to suffer no inconvenience. After which he injected into the different veins of the same animals amygdaline and emulsine, and the animals speedily manifested the symptoms of hydrocyanic acid poisoning, with fatal termination. The amygdalic fermentation is thence produced in the blood, since the emulsine a fermentescible matter, is brought into contact with its ferment.

In another series of experiments, M. Bernard injected into the veins of a dog, a solution of sugar and of yeast of beer. The animal died in two or three days with adynamic symptoms; the autopsy revealed lesions analogous to those of putrid infection. Here, again, the primitive alteration of the blood has had no other than the result of the fermentation of the sugar under the influence of the yeast. It would have been interesting to have ascertained, by microscopic examination, if the presence of the torula cerevisiæ would confirm the induction already made from direct observations.

———

M. A. Dubreuil communicates to the *Journal de l'Anatomie et de la Physiology, &c., &c., Ch. Robin*, the following note upon the cicatrization of bones and nerves.

Having removed from rabbits the middle portion of a radius with its periosteum and having seen the bone reproduced, he compared these results with those obtained after the resection of nerves, and deducts therefrom the following conclusions, viz: "When a portion of the bone or of nerve is resected, the loss of substance is replaced by a tissue which, at the end of some time, undergoes *osseous or nervous substitution*, for which it is not at all necessary that the normal sheath of the portion excised, whether periosteum or neurilemma, should remain," etc., etc., etc.

———

M. J. O. A. Mongeot asserts, as the result of his investigations into certain derangements of nutrition consecutive to nervous affections, that there exist no fibro-cellular trophic nervous elements or tubes having direct action upon the nutrition and the secretion of the elements situated in the vicinity of their extremities or of their cells of origin.

There are no trophic nerves known other than the vaso-motors.

The secretory disturbances, those of absorption, indurations, softenings and hypertrophies or other alterations consecutive to lesions of nerves, are

consequences of circulatory perturbations by the intermediation of the aforesaid nerves, and not the consequence of the action of the nerves which would have, after the manner of electricity for example, an influence upon the molecular or chemical acts of assimilation or disassimilation in a zone of a certain extent outside of their surface.

Tubercles of the retina and the choroid, considered as diagnostic of tuberculous meningitis.

Apropos of this subject M. Bouchut asserts:

1st. That tubercles of the retina and of the choroid indicate either tuberculous meningitis or general tuberculosis.

2d. A febrile case presents disturbances of intellect, of motion and of sensation, the existence of tuberculous meningitis may be inferred.

3d. Tubercles of the choroid constitute one of the most rare manifestations of the tuberculous diathesis.

4th. Tubercles of the choroid occur under the form of white miliary granulations. Sometimes brilliant and nacreous.

5th. The retrogression granulo-fatty metamorphosis of the normal elements of the retina and of the choroid cells, is the origin of tubercles of the retina and of the choroid.

BOOKS RECEIVED.

A TREATISE ON THE PRINCIPLES OF MEDICINE AND PATHOLOGY, DISEASES OF WOMEN AND CHILDREN, AND MEDICAL SURGERY. By W. Paine, M. D. Philadelphia: *University Publishing Society.*

THE PHILADELPHIA SYSTEM OF OBSTETRICS. In Twelve Parts. Fully Illustrated. Designed for a Text-Book for Students, and as a Reference for the Practitioner. By Jos. S. Longshore, M. D., Professor of Obstetrics, etc. Philadelphia: *University Publication Society.*

CLINICAL LECTURES ON DISEASES OF THE URINARY ORGANS, Delivered at University College Hospital. By Sir Henry Thompson, Surgeon Extraordinary to H. M. the King of Belgians; Professor of Clinical Surgery, and Surgeon to University College Hospital. With Illustrations. Philadelphia: *Henry C. Lea,* 1866. Pp. 204. Chicago: *S. C. Griggs & Co.*

The subjects very pleasantly and lucidly discussed are: Diagnosis, Urethral Structures, Hypertrophy of the Prostate, Retention of Urine, Extravasation of Urine and Urinary Fistulæ, Stone in the Bladder, Lithotrity, Lithotomy, Cystitis and Prostatitis, Diseases of the Bladder, Paralysis, Atony, Juvenile Incontinence, Tumors, Hæmaturia and Renal Calculus.

ON CHRONIC BRONCHITIS—Especially as Connected with Gout, Elphysema, and Diseases of the Heart. Being Clinical Lectures delivered at the Middlesex Hospital, by E. Headlam Greenhow, M.D, Fellow of the Royal College of Physicians, Consulting Physician of the Western General Dispensary, &c., &c. One volume. Octavo. Price, $2.25.—Chicago: *W. B. Keen & Co.*

MACKENZIE ON THE USE OF THE LARYNGOSCOPE IN DISEASES OF THE THROAT. Second Edition, with additions, and an Essay on Hoarseness, Loss of Voice, and Stridulous Breathing in relation to Nervo-Muscular affections of the Larynx. Edited by J. Solis Cohen, M.D., and Illustrated by two lithograpic plates, and fifty-one engravings on wood. Octavo. Price, $3.00. Chicago: *W. B. Keen & Co.*

WYTHE'S PHYSICIANS' POCKET DOSE AND SYMPTOM BOOK.—Eighth edition, 32mo., cloth. Price, $1.00.
.do do leather, with tucks and pockets, $1.25. Chicago: *W. B. Keen & Co.*

CLEAVELAND'S PRONOUNCING MEDICAL LEXICON. A new and improved edition (the eleventh). Price, $1.25. Chicago: *W. B. Keen & Co.*

Rush Medical College—Spring Announcement.

The Session will commence Wednesday, March 3d, 1869, and continue to the 1st of July.

The Course will consist of daily lectures and recitation at the College, and Clinical observations in the Hospitals, Infirmaries, and Dispensaries of the City.

Prof. BLANEY will give instructions in Practical Chemistry, affording access for that purpose to the large and well-appointed Laboratory of the College.

Prof. POWELL will teach Surgery.

Prof. GUNN will conduct his Surgical *Clinique* at the College.

Prof. ROSS will conduct the Medical *Clinique* and instruct in Physical Diagnosis and Diseases of the Chest.

The County Hospital will afford two Medical and Surgical *Cliniques* each week.

The Marine Hospital will be open to students of the Course.

The Charitable Eye and Ear Infirmary is located near the College and will be open every day of the week for Clinical teaching, by E. L. Holmes, M. D., Lecturer on Disease of the Eye and Ear.

The College Dispensary will be open every day, affording to students an excellent opportunity for perfecting themselves in the art of diagnosis.

The Dissecting Room will be kept open during the entire session, and will be abundantly supplied with material for the study of Practical Anatomy.

Special instruction in Practical Chemistry will be given by Prof. Blaney, to such as desire.

Graduates of the College will be admitted to the Spring Session on the matriculation ticket. All others will be required to procure tickets.

Fees for the Spring Term—exclusive of Hospital and Demonstrator's Tickets—$20.

Certificates of attendance upon the Full Course will be considered the equivalent of time passed under the instruction of a medical practitioner during the Spring and Summer months of the year.

For the Annual Catalogue of the College, and for additional information concerning the Spring Session,

Address

Dr. E. POWELL, *45 S. Clark St.*

Students arriving in the City are requested to call at once upon the Janitor, Mr. CHARLES KEIL, at the College Building, corner of North Dearborn and Indiana Streets, Chicago.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—FEBRUARY 1, 1869.—No. 3.

ORIGINAL COMMUNICATIONS.

Mental Influence in "Physical" Disease.

AN INAUGURAL THESIS FOR THE DEGREE OF M. D., BY JOHN WILLIAMSON, CHICAGO.

To medical science, more than to any other, is all knowledge tributary. First in importance to man, it is first in facility of attainment and diversity of fulness. In medicine no culture comes amiss, no zeal is unrequited. The possibilities of its empire are infinite, its present exaltation a marvel. Its catholic spirit is a sure insignia of conquest, its victories are its sublime apology. Its spirit of rational and positive inquiry, associated with its heroic self-abnegation, have been in all time the terror and admiration of the human mind. There can be but one Medical Science, as there can be but one science of Chemistry, Geology or Geometry. Opinion here is inadmissable; it is not what a man *believes*, but what he can *prove*, that is valuable in medicine. Before the rigorous application of the philosophy of induction to the determination of all truth, the

unaided effort of reason was deemed competent to unfold and exemplify all that it was important or desirable to know. While induction is the only possible means of scientific investigation, the existence and cöordination of its factors—reason and observation—are not to be denied. The relation of the first to medicine, this essay proposes to investigate. Preconceived opinion, in almost every instance, is allowed to influence experiment. But few are willing to let so unassuming a messenger as science correct elaborate and learned ignorance and conceit. Our opinions, of long standing especially, are our own property, and occupy in consequence a distinguished place in our esteem, while truth being the heritage of all can never be appropriated exclusively.

What I propose in this paper is simply an inquiry. That the mind and body do reciprocally influence, in some degree at least, is indisputable. Concerning the quantity and extent of this influence opportunity exists for interesting and instructive controversy and research.

That there may be no mistake relating to my terms and logic, a few preliminary definitions are advisable.

If my phraseology and reasoning are inaccurate in facts, and unscientific in philosophy, I trust their impress of personal subjectivity may be an apology for the blunders, and excuse the instinctively evoked criticism.

A scientific truth, is the fundamental and, in consequence, unavoidable response to the question, Why?

A science, is the systematized association of these fundamental responses.

By natural, I mean that which is consistent with the actualties or possibilities of experience.

Experience is the sum of mental exercises, and knowledge is the sum of experience.

All force is phenomena, and all phenomena are force.

All motion is force, and all force is motion: then all motion is phenomena, and all phenomena are motion.

Such dogmatism as this is not allowed, but by postulates.

Philosophy is the investigation of the relations of facts and forces.

By law is meant that relation existing between phenomena by which their mutual consanguinity is established.

Life is affirmable only of the physical; if there be in man any spiritual quality, it is not "alive" but conscious. Consciousness is the "life" of the mind. Every distinct mental activity is a faculty.

Matter is the summation of correlated force, whose properties are partly active and partly potential. Mind is an element in this summation, generally potential, but vigorously actual under appropriate conditions of organization. The quantitative identity of all force being conceded—there can be no dispute concerning the qualitative sympathy, and thus is afforded an emphatic intimation of mental power influencing material change. When this material change is abnormal it constitutes disease.

No exercise of force is possible without molecular waste. Mentality furnishes no exception to this rule. No increment of thought is possible without being induced by and inducing palpable tissue metamorphosis. To this psycho-physiological law there is no exception. All force, so far as we know, has its origin in the solar ray. Solar power is potentially lodged in diet, and becomes actual in organization. Organization is the legitimate and invariable sequence of life. It may be termed the expression of life. By many life is regarded as merely the dignitary presiding over the vital functions. It is more than this; it is the necessary antecedent, determining organization in general, and likewise every specific function. Life and organization, in the present condition of our knowledge, are the constant conditions of mentality. Should it be thought impossible then, or indeed, even strange, that mind influencing life should determine, in very many cases, structural lesion. Should not an intimate and earnest acquaintance with the science and relations of mind, be regarded as an indispensible auxiliary to practical therapeutics.

Other things being equal, mental, moral and physical power are determined by the quantity and quality of food eaten. This unity of origin is powerfully suggestive of a common dependence, and dynamic concord and sympathy. I assume in this essay that inductive reasoning is philosophically composite, involving induction proper, by which generalizations are justified, and deduction, affirming of an individual what the generalization affirms of the class to which the individual belongs. My use of these essential factors being understood, no confusion of logic need exist.

In the inquiry I am making I would not ignore the value and facility of hypothesis. It is a ready and convincing element in all inductive reasoning. Without it science would be at a stand-still. Conclusions are never born naturally, they are creations of cultivated art. The only natural element of science, is the essential and antecedent hypothesis. An hypothesis is not a mere guess, as most people without reasoning conclude. In what follows its definition may be found. The "known" and "unknown" are relative terms, distinguishing human knowledge. The "known" is actual, the "unknown" possible revelation. It is from the "unknown" that the "known" is recruited and extended. There is no impenetrable barrier separating these grand kingdoms. The bright rays of hypothesis perpetually maintain a cheerful radience in the otherwise profound and hopeless gloom. Hypothesis is the mind's rational, scientific judgment of the "unknown," guided by the light of demonstration. The too current practice of interchangeably using hypothesis and assumption, as indiscriminate synonyms, cannot be too earnestly deprecated by every friend of an exact and versatile nomenclature. I may be excused for my lengthy allusion to this subject, since the scientific philosopher finds no greater impediment to remove, than this unintended or malicious confounding of terms and meanings. Before the mariner touches the shore, all on board are made glad by his ringing cry, "land ahead!" So

the man of science, standing upon the brink of the "known," distinctly sees truth "yet to be." This is hypothesis.

No organ of the body can be normally exercised without appropriate stimulation. Pure blood for the heart, air for the lungs, portal blood for the liver, nitrogenized aliment for the stomach, chyme for the intestines, chyle for the lacteals, etc., are the law of life. The brain, like the heart and lungs, is an organ whose function is to think. Like them, it too must be aroused and sustained by stimuli. These are external impressions. If this stimulation be denied or but indifferently supplied, sleep first, and unless relief speedily come, death unfailingly supervene. Thought then, is impossible without external impressions. Memory, as a type of mental action, beautifully illustrates the dependence of mind upon matter, and likewise the facility of its ready response to impressions. Memory is that activity of the mind by which conceptions recur through association that were once present by perception. Two elements of necessity exist in mental exercises, and but two—the objective and the subjective. There is something to perceive, and something to perceive it with.

There are but two kinds of knowledge accessible to intelligence—the real and the ideal. Knowledge of the first is obtained by reason, of the second by imagination. Neither acquisition is possible without the indispensable influence of the objective. The perceiving capability is dormant, of necessity, without the tangible something to perceive.

If then, exercises of mind are impossible without the constant influence of physical agencies; and if every mental activity involves nervous waste; and if nervous waste may implicate general structural mutation; and if in this general structural lesion specific organs may be included; and if specific change may be sometimes morbid and abnormal, then is not the inquiry pertinent: may not mentality largely and insidiously determine disease or lesion of structure?

Light is a "mode of motion" whose impressions fall upon every surface. The surfaces thus affected must yield wholly, partially, or not at all. If wholly, the light is "white"; if partially and modified, one of the prismatic colors, determined by the form of the yielding; and if not at all, we have darkness. Color then is a "mode of motion" in light, depending upon the peculiarity of the reacting or reflecting surface. It is much the same with the mind's influence upon the body. To understand this statement and illustration fully, the absolute brotherhood of force must be understood and admitted.

It will be remembered that thinking and cerebral activity are practically interchangeable expressions. Every intellection of brain falls upon the entire organism, through our inevitable dynamic corelation, inducing either excessive, normal or deficient, added stimulation. The first and last dispose toward disease, the second supplies a waiting necessity. Instances verifying these propositions readily occur without reflection or enumeration.

Material and mental power present for consideration certain necessary qualities, without which we cannot conceive of the existence of either. The three elements of material power, or more appropriately, material existence, are extension, impenetrability, and inertia; of mental: perception, sensation and will. These last are given in every mental act. They are required to constitute it such. Eliminate one, and the mind's exercises are as effectually destroyed, as would be the constitution of matter without its essential characteristics. This fundamental identity of composition and requirements, is to me strongly presumptive of qualitative relationship. If this be indeed true, the all-pervading principle of the practical unity and correlation of phenomena, adds another to the accumulated evidence of universal organic connection with mental influence.

Another argument for the identities I claim, is derived from the simplicity of all force, as far as known. One illustration, amplified from the natural world, may suffice. The

solar influence, one of whose phases is light, is not compound but simple. Its seeming composition is due to the varied peculiarities of the media through which the light passes and the surfaces against which it impinges. Differences in momenta determine differences in refrangibility. That one force should have several momenta is well nigh an inexplicable paradox. The problem is solved by the construction of the luminous wave. The phenomena of mind too, are simple. This no one can deny. The unity of human consciousness by which personal identity is uninteruptedly maintained, is possible only through unity of mental action. Every effort to reconcile the diversity of consciousness with the preservation of individual personality, has been a signal failure. All force is a related, conserved and dependent unit, and as just illustrated, affords still another confirmation of what my original proposition affirms. My argument must not be mistaken for a restatement of the doctrine of "reflex action." There is, of course, a mutual blending in some important particulars, but still they are fundamentally dissimilar. I am attempting suggestions relative to the development of mental power; and likewise to its controlling influence upon organization, as legitimate sequences of the correlation and conservation of force. Strictly speaking, I presume, all disease is wrought in consonance with one philosophy, and yet the circumstances attending its appearance and progress seem so diversified and conflicting, that well defined distinctions and definitions are required. In reflex action the mind is impressed and, at once, in the remote distributions of the nervous system, changes of tissue occur. This result is subsequent to organization. In the discussion I am indulging, mental action is contemplated in immediate relation to its mechanical equivalent—life, the builder of organization. An instance illustrating both, is the perturbation resulting in syncope. If the subjective cause of the first fainting could be prolonged and increased, commensurate with the degree to which the patient has become

accustomed to it by experience, some obstinate and often fatal disease would supervene. This influence is cumulative by reflection. Its highest development is found in the subjective.

Another argument I offer may be called a novel one. I am not particular how they come, if their miscellaneous arrangement is not allowed to interfere with their appropriateness.

I refer to the economy and providence of nature in all its work. Whatever the human being needs, the human being is competent to supply, else his endowments are naturally and deplorably incomplete. Now, there is nothing we all so much require, as intelligent, discriminative power, to guide our bodies in safety amid all the dangers and vicissitudes to which they are unavoidably exposed. The power of mind is the only capability qualified to meet this requirement. It cannot do it at all without intimate and often controlling relation to the entire organization. If it is admitted that any such essential relation exists, and is exercised continually in normal relation to life and health, then it must likewise be conceded, that in the aberrations to which all force is subject, derangement and structural change may and so does occur. There is a large and important class of diseases, familiar to every practitioner, whose etiology is obscure. Professional ingenuity and acumen are exhausted in fruitless efforts to assign for their existence and variety, adequate causation. In such cases I suggest a thorough investigation of the mental influence involved, intimating that astonishing results are here in store for some one. This examination cannot be successfully made without an exact knowledge of the manifold science involved.

I may be permitted to add still another illustration.

My argument now shall be a series of contrasts between man and the lower animal and vegetable. My object is to attempt to show the transforming and cultivating tendency of mind upon organized beings. The vegetable, though a

simpler order of life than the animal, of even the lowest kind, still has some common characteristics. The principle and phenomena of life are essentially the same. It is the fact of consciousness that gives the animal his distinctiveness and individuality. Not the conscious intelligence inert and dormant, but active, aggressive and self-reliant. Indigestion, respiration, assimilation and decay, the same general principles are observed throughout all organic creation. Anatomy and physiology are one in principle where the laws of organization prevail. Matter is of necessity immeasurably inferior to the animal, no matter how exquisitely its crystalline structure may be conformed, or how resplendent its beauty by the touch of art. The animal inferior to man is such from the deficiency of mental power. Man is afflicted by different diseases, adjusted to unlike offices, and experiences riper and richer feelings. The inquiry now pertinently arises: if man is thus different and superior to other animals in virtue of his perfect and complicated mental enrichment, which to so large an extent determines all his discipline, habits and emotions, may not these same rare gifts be essentially related to disease?

Again, it may be maintained that mental and vital forces are but coördinate links in the one dynamic chain, from the variety of philosophy involved in their cultivation and growth. They each develope by exercise. This is the law and excellence of life and health. Every additional increment of power is gained only by paying it an industrious tribute. I receive it as a demonstration that a common principle of development establishes a common origin. Not only is this law of growth applicable in general, but in all special particulars likewise. The exercise, resulting in discipline, must be guided by the same rational requirements in both instances. Excess and deficiency are everywhere equally disastrous. The quality and opportunity must, with the same discreet foresight, be chosen. The only distinguishing feature claimed by intelligence, is the

capability of independent volition. All who watch with care the characteristics of this element of mind, will see applied the same law and consequence of culture. Now I am disposed to the judgment, that so intimately are these forces related to each other, and to the same law of exercise, that deficiency or excess, as currently supplied, lead to frequent and obstinate disease. As long as the human organization is regarded as composite, respecting the existence of separate and independent entities—the material and spiritual, science must be, in degree, confused and unsatisfactory; but when all phenomena are received in their true light, as flowing from one common force, the millennial day of science will be ushered in. An argument, too, is founded upon the facts of the untiring activity of mind and the indestructibility of force. All mental action, not envisioned in consciousness, is consumed in influencing vital action. The phenomena that action and reaction are equal, is just as true of mind as matter. It really appertains to force rather than to either of these assumed entities. But few understand the meaning of this very common philosophy. A ball, for example, is thrown against a wall, and the reaction, determining the rebound, is equal to the original impulsion. Is it true we ask, after all, that the reflecting surface returns the force undiminished? As an obvious or mechanical fact, I answer no. When mechanical force seems to be expended, it is not lost, but changes its form, conserving every increment in the mutation. This is all that is meant by the proposition that action and reaction are equal. The hammer is not struck as hard as it strikes, but if all the divided motion excited by the hammer, were directed against appropriate machinery, the power exerted would be just equal to the first. The same principle prevails in mind. Every mental exercise is continued through the vicissitudes of material change. Much thought is signified in language, whose expression costs structural death and elimination, and much more, without being thus embodied, records the fact of its existence in the

increased residuum of the emunctories. ' This suggestion surely recalls the intimate subjection of the physical to one of its forces—mind. A familiar and striking illustration of the power of mental influence in regulating and subduing the physical, is found in the causes that control age. Men do not grow old by becoming bald, gray, and by losing the elastic step, but by the loss of mental and social fire; by unseemly moroseness and failing urbanity. The cares and unhappiness of domestic life, of unsatisfactory business relations, these being yielded to by the intellect, soon induce the annoying symbols of age. If the mind is so gifted as to be superior to all these besetments, life must continue long and well. To constantly dwell upon any evil deplored, is almost the surest way to incur the affliction. Become practically oblivious to its existence, and life and health are at a premium. Every physician recognizes the aid afforded by a cheerful and contented mind in the administration of medicines. What most regard as an important therapeutic agent of cause, I am disposed to suspect as the cause of the disease. While my fellow-practitioners subordinate this auxiliary to medication, I shall subordinate all medication to it. While, in a certain class of cases, he enforces the versatility and variety of medicines, I shall enjoin an observance of the plain requirements of rational mental physiology. When revulsion is attempted by the infernal miseries of counter-irritation, I shall often secure a choice result by the revulsion of emotion. I shall check nasuea with a joy, dyspepsia with a hope, phthisis with a spree, and rheumatism with grit and warmth.

One of the most unexpected yet complete and beautiful illustrations of the conservation of force, is found in the equivalency of chemical and vital phenomena witnessed in the human body after death, and the imperceptible mutations transpiring during life. The first is purely obedient to inorganic chemistry, the last to vital action. In three and a half years the elimination of nitrogenized matter is equal to the sum of all such tissue in the normal body, and

the dead body, when decomposition has been subject to certain conditions appropriate to the action of chemistry, will last before conversion into "adipocere" the same length of time. Do not these facts sustain the equivalent quantity of these forces, and likewise their essential brotherhood? It adds another to the largely accumulating lists of evidence establishing the compensations of all phenomena. The relation of mental influence to vital action is so intimate and indisputable, as not to excite the investigation its importance demands. The emotions are the best indices of the extent to which the mind is working. Intellections sometimes dissemble and mislead, the emotions are always truthful. These seem to be connecting links between the intellect and matter. They hold both in sympathy and support. No organ of the physical can remain long unperturbed in the focus of the feelings. Their burning and eloquent power soon disturb the otherwise even current of their life and health. These disturbances, long continued, are disease.

It seems that pathologists have proved that disease is structural leison, whose symptoms are indicated by functional derangement and final ruin, if repair be not speedily instituted and secured. The aptitude for lesion in any tissue, one would suspect, would be determined by the especial character of the tissue. This natural presumption is sustained by facts. It is known that nervous tissue is the last to suffer structural lesion. The superior integrity of this tissue is not only full of benevolence, but indicates, as well, the fact of the maintenance of this vehicle of thought, against the mutations incident to organization in general. These, in connection with other facts, prove incontestibly the supremacy of mind over matter, and likewise the natural relation of the mental influences to the direction and control of organization. If it be denied that the brain and nervous system think and feel themselves, it will still be admitted that these are the organs through which thought is manifested. In either event, the point is

sustained, that the mind's integrity is longest maintained, and its controlling relation to organization most intimate and persistent. Now the exercises of mind are largely subject to individual control, so that our life and health are in an important degree committed to the keeping of our volition. More, than with any other agency, reposes our life and health with our choice. Gloom and foreboding terminate in disease; cheerfulness and occupation are the harbingers of long and happy life.

If there be two entitities, mind and matter, the ultimate conditions of their being are not very discrepant. They must, in the dimness of practical infinity, approximate an absolute identity. This I infer from the divisibility of matter. There are those who object to this proposition, and affirm the infinite indivisibility of the ultimate atom. Of the existence of ultimate atoms there is not one item of experimental or conceptional proof. As long as man can mechanically divide matter, its ultimate indivisibility is not established. If a man divide a portion of matter in his hand, a portion must remain. Every fresh separation still leaves a portion in hand. When the division has gone so far as to be practically impossible any further, a part of the original piece is still intact. One's conceptions are only the antecedents of one's knowledge. Our conceptions are experimental possibilities to the incoming generation of advanced culture. An indivisible atom is then really inconceivable. To form a notion of an atom certainly three things are necessary, if we ascribe to it materiality: extension, impenetrability and inertia. What then is an atom? A unit certainly, whose half is as readily conceived of as its whole. There can then be nothing ultimate, and yet the approach to it must be infinite. Conservation and correlation are now the watchword, not ultimateness and eternity. Infinite divisibility in matter is requisite to condition impenetrability, without which no conception of matter is possible.

What I wish these remarks to subserve, is what I chose

to call the progressive ultimateness of matter and mind. Concerning the simplicity of mind there is no controversy; the practical simplicity of matter is partially understood and conceded. In the mutual approach of these toward infinity I detect mutual harmonies and relationship. I find too, after these elements of existence coalesce in simplicity, the grandeur of volition transpires in assuming charge of all. To the enterprise and intelligence of the human will all ultimate existence is finally committed. Here, in this apparently remote relation to organization, I find the human mind moulding influences finally destined to confer disease or death. That such intelligent and conscious empire should exist, may not be deemed even strange when the necessity of it is once appreciated. The elaborate and insentient perfection of all organization requires the presence and guidance of an intelligent and capable directing agency. Such requirement the mind supplies. Its easy control has existed so long and behaved so well, that we are usually oblivious to its existence and insensible to its claims. The finest illustration of the influence of mind upon body, just now occurring to me, is found in the history of war prisons during our recent eventful and unhallowed war.

It was mind here that wrought the physical disease.

The altar of despondency claimed nearly all the sacrifices.

What was so palpably true in this horrible instance, exists as veritably in most diseases.

Any chemical element, compound or mixture, uninfluenced by life, is inorganic. Any chemical compound influenced by life is organic, and every mechanical mixture determined by life is an organization. The vital relation of life to disease and health, is concisely and definitely stated by these propositions, whose accuracy can hardly be assailed. A variety of circumstances transpire to illustrate the intimate dependence of normal life upon normal intellect and emotion. That life is the antecedent of every vital function, is undeniable. Are not these instances of

mind affecting life, and through it of necessity all organization ?

Bad news, long continued and often repeated; severe and irreparable disappointment; high and exalted hopes blasted forever in a moment; long and anxious foreboding over imaginary disaster; ever anticipated failure in business relations or domestic; the early and final ruin or death of darling love and hope; monomaniac devotion to any cherished work or thought; upbraiding and remorseless conscience; an intellectual zeal or religious enthusiasm untempered or uncontrolled by the strong arm of reason; loss of self-respect through general social ostracism; an unrequited and hopeless effort to be what is impossible. Are not all these, and immeasurably more, among the depressing agencies that subtract from the continuance of life.

It is the function of the brain to think, as it is of the eye to see or the ear to hear. It is fashionable with psychologists to assign to an imaginary entity, intangible and spiritual withal, absolute dominion over all instances of perception. This is a figment of scholasticism rather than a sequence of induction. "How shall we reason but by what we know?" Philosophy and common sense are really not far asunder. By the last all aspiring criteria must be adjuged. Common sense is that rare and valuable gift by which we accept what seems evident, without involving philosophic or linguistic twaddle to mystify and mislead. The eye seems to see, the ear to hear, and the brain to think. This is sufficient. It is the organ and its appendages that constitute its unity and entirety. If the nerves of special sense be severed, the organs of which they are physiologically integers are likewise destroyed. The integrity of every part is requisite to give the whole completeness and function. To say that the spiritual element in man, or even his brain, is the appropriate and exclusive means of perception, is an assumption purely gratuitous and unphilosophical, because unwarranted by what we

know. That the exercises of brain exert an influence, either salutary or injurious, over the general organization, and thus play an important part in health and disease, seems to be universally admitted and utilized.

I cannot dismiss the presentation of the philosophies of this discussion, without recounting what I esteem the primal and positive evidence of unity of principle in matter and mind. Of course I allude to the indestructibility of the properties and forces of each. In matter we usually denominate this imperishable persistence, indestructibility; in mind, immortality. Both are true in virtue of reciprocal and interchangeable conversion,—the underlying and happy agency of all causation. I am sure no other reason has been assigned equally plausible, to account for or to establish the hope of immortality. The reasoning is simple and apparent. In the conversion of all force, constant equivalency is maintained. The phenomena of mind, being forms of force, are likewise conserved exactly amid all the vicissitudes to which their multiplied phases are exposed. This fact being no longer in doubt, how the extinction of the thinking principle at death can be for one moment maintained, is to me very singular. If the essential perpetuity of mind be like that of matter, can it be deemed mysterious, or impossible, that they should very intimately influence each other during the present life of both? When the conditions of existence and activity, now appertaining to each, and in virtue of which they so reciprocally interchange, are dissolved in death, then under new and perhaps unlike forms, the quantity of mental power must be preserved. What is true in death is equally true in life, and more evident.

An organism is a style of mechanics determined by life, and whose compound associated function is reproduction and death. For some reason there are indeed the law and excellence of life and growth. It is a fact, disputed by no one, that these normal and necessary metamorphoses are a prime and obvious sequence, in no unimportant degree, of

well directed and persistent mental and moral action. No man is really healthy unless he be a thoughtful and industrious student. For every intellection there is a definite amount of nervous change; and for every natural nervous change there is made a definite contribution to vitality. Thinking is the exercise in which the nervous system delights to find health and pleasure. There is a great difference between thought, as it should be, and those mental gymnastics in which so many "educators" direct their pupils to indulge. Of course to such games of intellectual expertness I am not now referring. I allude to that calm, sedate, persistent mental exercise, in which the nervous system, and through it the entire organization, is inspired to normal nutrition. That the intellect and emotions are thus made almost the arbiters of life and death, seems an interesting and desirable truth. Intellectual and ignorant people are not subject to the same classes of disease. What are called "nervous diseases" never appertain in many of their phases to the illiterate and squalid.

Having enumerated, in detail, the circumstances under which mental influence may determine "physical" disease, it remains to specify some of the evidences diagnostic of the difficulties to which I refer. I am inclined to the judgment, that even where the lesions are palpable and their cause is evident, that certain investigations should be made, to decide with intelligence relative to the quantity and kind of the mental action involved. The physician may well be proud of his high distinction. He has access to the usually hidden and unintelligible philosophies of life and living. Hardly a scientific inquiry can be impertinent or irrelevant, and all must respond to his appropriate questions. I can mention no specific or formula by which to conduct these examinations. General considerations only are possible in the absence of any particular disease. The few I mention may hardly be deemed inappropriate. It will be understood that I am not excluding, in the connected questions I ask, the customary ones proposed to

diagnosticate all the features of the malady, I attempt simply to systematize certain general methods of arriving at the influence of mind in every case of disease. The usual symptoms of particular disease are invaluable to elucidate the inquiry I propose to make. If sufficient importance is attached to what I offer, I care not what else is included. Unity and perfection are the prime requisites of medical examination. My first inquiry would be addressed to the general physical constitution of the body, with reference to its influence upon the mind. The predisposing tendencies of mind affecting organization may be, and usually are, determined by the general characteristics of the body; the quality and texture of nervous matter; the extent of fatty deposits; the kind and developement of muscle; the nature and variety of physical idiosyncrasy; the best average of appetite; the amount and quality of food eaten; the quantity and value of excreta; the extent to which the illness has been protracted, also the severity, and the degree to which it has been borne: these are physical considerations, never to be overlooked, in every medical examination for the extent and phases of disease. Again, the mind itself requires your care. What are its prominent charteristics? Is the mind "well balanced," or are there well marked latent or active special gifts or deficiencies? Has it seemed to hold empire over the vital functions, or to be naturally subordinate to them? What are its normal tendencies toward activity? Is it working most of the time, or only periodically, if at all? To what extent is emotion included in the mental action, and what peculiarities does it exhibit? How about the element of "will"? Is the mind resolute or yielding? How are good and bad fortune generally borne? Under what circumstances does the man generally give up when in health? These questions deduce his mental physiology.

Another class of questions should contemplate the patient's antecedents. Have they been favorable to the developement of mental power? Have his parents been well

formed intellectually, and have they been accustomed to think and feel? Does the man resemble one or both of his parents, or even some distant relation, it may be, whose peculiarities may have been transmitted and retained? How about the man's cultivation; was he the victim of early and earnest study and discipline? In what has his mental training consisted? What kind of thought has been his preceptor? At what period of life did he begin to think, and what has been the extent to which in the immediate past it has been carried? What has been the moral education of the man, and has he been sensitive to its tendency? How has conscience been treated, and how has it behaved? Has the man been harrassed by its peculiar and unrelenting torment, or has his life been quiet and morally peaceful? To what religious ideas does he stand committed, and have any such been heartily embraced? If so, have they been liberal and cheerful; or dark, forbiding and hopeless? To this point especial attention should be directed. How about social and domestic affairs; is the man happily situated at home; if not, what elements are averse, and who is really most aggrieved? Are the patient's circumstances easy, or is he annoyed by pecuniary liabilities? These include almost an exhaustive enumeration of questions for general guidance and aid. An inquiry of prime importance is now suggested. What remedial measures are appropriate and available in this particular case? Of course nothing specific can be here mentioned. The entire treatment must be measurably synchronous and thoroughly consistent. The physical lesions, involved by other agencies and complicated by unknown influences, constantly modify every instance of disease. This must be borne in mind by the educated physician, whose reason is observing the phases and virtues of mental action. Nothing can be done without an intimate knowledge of mental physiology. A profound acquaintance with the mind, in action, is as necessary to rational psychological therapeutics, as the familiar physiology of life is to ordinary medicine.

The indispensable knowledge of physiology is the thing most required to qualify the practitioner for his honest duties. Medicine is empiricism without it, and cures an accident. The normal deportment of mind being known, every pathological aberration is understood. The mind requires appropriate stimulation like the body. From its peculiar pabulum it must be nourished. Mental disease is mal-mental nutrition. It is the duty of the practitioner to ascertain and study any deficiency or excess in this direction, and meet them, in harmony with the demand of nature. I must forbear. The subject is still interesting, and seems exhaustless. Every medical college should teach the science of the mind, with especial reference to disease and remedy.

Case of Placenta Prœmatura.

BY HO. BERCHELMANN, M.D., BELLEVILLE, ST. CLAIR COUNTY, ILLS.

Was called on the night of the 14th to 15th of January, 1869, at 12.30 A. M., to attend Mrs. H. L., German, aged 36 years, a coal digger's wife, of light hair and complexion, and robust healthy constitution, in her eleventh confinement with her twelfth child. Found Mrs. St., a well instructed and intelligent midwife present. Learned from her that she had been sent for the same night after 10 o'clock, and found the woman suffering from extensive hæmorrhage, with the placenta presenting; she further said that the os was fully dilated, and I could begin to operate at once; of the child she could feel nothing.

The patient was restless and anxious, begged for help, had ineffective labor-pains and a weak, quick pulse, the blood streaming from under the bed. On examining with two fingers I found about two-thirds of the placenta filling the vagina, the rest retained and grasped as it were in the lower part of the uterus. It attracted my attention that

the placenta was of loose, spongy and flabby structure, and not like a recently expelled healthy afterbirth, solidly bound together by the membranes; of the fœtus I was not able to detect anything. I immediately had the woman placed on a square bed, (the forceps being within reach if needed). I introduced my right hand, and by carrying it round between uterus and placenta disengaged the latter, and with a slight motion downward caused it to slip over the palm of the hand; with the last end of the placenta, and wrapped up in it, the right hand of the child descended into mine. When I separated the fœtal hand and placenta, the latter slipped and fell to the floor. In replacing the child's hand and arm I came in contact with the other (the left), evidently an entire square position of the child. In passing the child's arms and running my hand up along the cavity of the os sacrum, I reached the back of the fœtus, which convinced me at once that I had chosen the wrong hand, and that the child's feet must be found behind and above the arcus pubis. The uterus was in anteversio with the fundus, resting against the abdominal walls. I withdrew the right hand, with it elevated the uterus externally and straightened it, introduced the left hand behind the os pubis and immediately seized the child's right foot, effected version, and with careful rotary tractions delivered the whole fœtus. The cord was wound twice around the child's thorax, and I was much astonished to find that the placenta end of the cord was yet retained in utero. As I knew from the beginning the child to be dead I had until then paid no attention to the cord, and was under the impression that it had been torn when the placenta dropped out. Supposing now that a part of the placenta with the end of the cord was yet firmly attached to the uterus, I introduced the hand again and conveved it carefully around, sweeping the inner side of the uterus with the dorsal side of my hand; this motion, together with moderate traction at the cord, caused the latter to slip out with the membrames of the ovum at the end of it. The uterus now firmly contracted and the

hæmorrhage ceased. I have seen the woman since several times, she is making a good recovery. At my last visit I learned from her, that on Sunday previous to her delivery she had a moderate flooding; the four days following she attended to her ordinary business without any outward symptoms, and on Thursday night at 8 o'clock she suddenly had severe hæmorrhage and slight labor-pains; at 10 o'clock she sent for the midwife. I think this is a decided case of placenta præmatura, and not of placenta prævia, properly speaking. My explanation is as follows:

On Sunday the detachment of the placenta commenced causing a moderate flow of blood; on Thursday, with the first labor-pains, the detachment was at once and entirely effected, followed by extensive hæmorrhage; the placenta was even separated on its fœtal side from the membranes, and by the contractions of the uterus expelled before the child. The membranes with the inserted end of the cord, by the pressure of the child's body, were glued to the inner wall of the uterus, and so retained. Had the child had a normal position and presented with the head, or even the nates, placenta and child would have been expelled together. It is perhaps proper to state here that fifteen months previous I attended the same woman when she had twins; the first child at that time was born alive at 9 A. M., head presenting, under the supervision of an ignorant self-made midwife, who did not send for me until six hours after the birth of the first child, and when the hand of the second was to be seen outside of the genital organ. with the cord prolapsed. I effected version and extraction. This second child of course was dead.

I wish to be excused if I have been rather lengthy in relating the foregoing case, but I consider it of sufficient interest and importance, especially for younger and less experienced members of the profession, who in case of emergency might be thrown entirely upon their own resources. Besides this I think it demonstrates the marked distinction between placenta præmatura and placenta prævia.

De-Nicotinized Tobacco.

BY T. WILLIAMS, M. D., MILWAUKEE.

It is not generally known that tannic acid de-nicotinizes tobacco. If the bowl of a pipe is filled about one-fourth full of tannin, filled up with tobacco and smoked, the aroma of the tobacco is almost entirely destroyed, and the smoker scarcely feels the effect of the tobacco on his nervous system. In this experiment the tannin powder does not take up all the vaporized nicotine (which is the intoxicating principle of tobacco and tobacco smoke,) as it passes through it. The smoke will at first be entirely free from all taste or smell of tobacco, but in a few moments it will have formed a passage through the tannin, through which it will pass so rapidly that all of its nicotine will not be absorbed.

The experiment is more striking if a bit of sponge is saturated with a saturated solution of tannin, and placed in the bottom of the pipe. The smoke of the first two pipefuls of tobacco will pass out as vaporless and innocent as the smoke of a child's rattan or grape vine cigar, and as devoid of tobacco smell. But if several more pipefuls are smoked, the tannin having taken up all the nicotine it is capable of neutralizing, the smoke will begin to pass out with its natural taste and aroma. A sponge, after being used in this way, acquires a peculiar stale tobacco smoke odor. A common pipe may be used in this experiment, but with it the smoker is very liable to draw some of the tannin solution into his mouth, producing an unpleasant "green persimmon" puckering. The Turkish pipe, which is provided with a reservoir containing water, answers the purpose admirably, The place for water may be filled with a saturated solution of tannin; or what is better,—as it prevents the unpleasant bubbling noise,—a sponge saturated with the solution.

By changing the sponge often enough, a person may smoke as immoderately as he pleases without any injurious

effects, and it is particularly recommended to ambitious young gentlemen whom the weed in its natural condition "makes sick." I should also suppose that smoking tobacco steeped in a saturated solution of tannin, and dried, would be equally harmless, but have not tried this latter experiment. I am not sanguine, however, that mankind will avail themselves of the advantages of this discovery. It will be like the Frenchman's antidote to the intoxicating effects of alcoholic potations,—it destroys the very effect for which the poison is used!

The North American Indians were wise, however, and availed themselves of this discovery hundreds of years ago. It is well known what inveterate smokers the Indians are, and still we never see any injurious effects of this habit upon them. This may be due in part to their vigorous constitutions and hardy nomadic life, but it is mainly due, I think, to the form in which they use their tobacco. Until they learn the habit from the whites, they rarely or never use the pure leaf. Their "Killikinnick"—the agreeable aroma of which once inhaled in a wigwam or lumberman's cabin, can never be forgotten,—is composed of equal parts of tobacco and the inside bark of a species of the *cornus coricea*. Sometimes the admixture of tobacco in it is not more than a fourth. This bark is astringent, and abounds in *tannin*, and therefore in a great measure neutralizes the effects of the tobacco. The fancy brands of smoking tobacco labeled "Killickinick," sold by tobacconists in papers, it is needless to say are pure tobacco, and have no real claim to the name. The Indian name for the particular species of swamp dogwood which they use for smoking is "Kinnikinnick," hence the name. As we learned the art of smoking from the American savage, it would be only showing proper respect to our tastes to take the weed as they do. They peel the inside bark of the shrub, dry it, pound it to a powder in their stone mortars, and then mix intimately with the crumbled tobacco.

Applied Chemistry.

Application of the Atomic or Thermic Law to Biatomic Metalloids. By Dr. Rabuteau. From the Proceedings of the Biological Society, Paris. Report of Gazette Mèdicale.

TRANSLATED FOR THIS JOURNAL, BY W. HAY, M. D., ASSOCIATE EDITOR.

I discovered, last year, a law, to the demonstration of which I devoted the greater portion of my inaugural thesis (*Vide* Experimental Investigations into the Physiological Effects of Fluorides, and of Metallic Compounds in General. Paris: Germer Ballière, 1867, and Gazette Hebdomadaire, 15 May, 1868).

According to this law, the metals are so much the more active as their atomic weight is higher or their specific heat lower; so that two or more metals being given, whatever may be their chemical analogies, their relative activities may be determined according to their atomic weights or their specific heat. Let us take, for example, sodium (atomic weight, 39), thallium (atomic weight, 204); the sodium is inoffensive, the potassium is a muscular poison in large doses, and the thallium is as terrible as lead.

When I speak of metals, it is, of course, to be understood that I speak of their salts. Compare zinc and cadmium, whose chemical analogies are remarkable, and it will be seen that the cadmium, whose atomic weight is 112, is much more active than the zinc, having an atomic weight of 62.02. I believe I am warranted in the assertion that iridium, whose atomic weight is 71.08, will present physiological properties (relations?) intermediate as to their energy, between those of zinc and cadmium. I believed that the atomic law should be applied to a certain number of metalloids. The first group of these simple bodies constitutes, as is well known, an exception to the law of Bouchardat and Stuart Cooper; but must the same be true of the other groups? I then examined the biatomic metal-

loids and discovered a new and remarkable application of the atomic law. The metalloids which form the second group are the following:

Oxygen, atomic weight	16 00
Sulphur, " "	32.00
Selenium, " "	79.50
Tellurium, " "	128.28

The chemical properties of these simple bodies, especially of the three last, present the greater analogies, so that they have always been associated in the same natural group. But in this connection, however, when it concerns biatomic metals, it is necessary to appreciate the physical properties which the atoms possess, the property of heat and consequently that of motion, for life is only motion. If the hydrogen compounds of these metalloids are considered, it will be seen that water H^2O is indispensable to life.

That sulphuretted hydrogen H^2S is a deleterious gas, but that nevertheless it may be introduced in considerable quantity into the digestive tube, into the venous blood (Cl. Bernard), whilst seleniuretted hydrogen H^2Se. is exceedingly dangerous. Berzelius nearly perished from having inspired only a very small quantity, and all those engaged in the examination of this gas know that a single bubble introduced into the nasal fossæ, produces coryza, sneezing and the abolition of the sense of smell during several days. As to tellurietted hydrogen H^2Te. an unstable gas very little examined hitherto, it should possess toxic properties in the very highest degree. I propose to experiment by causing animals to inhale atmospheric air charged with certain proportions of these three last named gases.

The same relative differences in physiological energy are recogized if the oxygen compounds of sulphur, selenium and tellurium are compared together. The sulphites, hyposulphites, sulphates and hyposulphates may be said to be inoffensive, if the metal they contain has but little activity. This was already well understood of the first classes of the preceding salts. I have demonstrated that the hyposulphates come under the general rule, that the hyposulphate of soda

for example may be taken in considerable doses, for I have injected five grammes of this salt into the veins of a dog without producing any alteration in the health of the animal. Moreover I myself took five grammes of the same salt, without experiencing any other than a very slight laxative effect. The selenites and the seleniates are on the contrary eminently toxic; they rapidly destroy animals by asphyxia with dilation of the pupils and of all the sphincters. Finally the tellurites, from a single experiment which I made appeared to me to be still more terrible, for after having injected, into the veins of a medium sized dog, a very feeble dose of tellurite of soda, this salt produced the gravest disorders which I had ever seen.

To render more apparent the differences of action of the compounds which I have examined, I will tabulate the principal circumstances of my experiments and their results, viz:

Animal.	Salt.	Dose injected into the veins.	Dose carried into the stomach.	Result.
		Grammes.	Grammes.	
Bitch.....	Sulphate of Soda.....	7	"	Negative.
Dog.....	id	14	"	id
Bitch.....	Sulphite of Soda.....	4.78	"	id
Dog.....	Hyposulphite of Soda.....	4	"	id
Bitch.....	Selenite of Soda.....	0.25	"	Death.
Dog.....	" id	0.12	"	id
Rabbit...	id	0.12	0,50	id
Dog.....	id	0.12	0.80	Transient effect.
Bitch.....	Selenite of Copper	0.12	0.50	id
Dog.....	Seleniate of Potassa.....	0.25	0.50	Death.
Dog.....	Tellurite of Soda.....	0.08	0.50	Death.

I propose soon to acquaint you with the toxic effects of the compounds of selenium and tellurium. I will only say that I classify these amongst the mechanical poisons, to which class I assign a different definition from that which has hitherto been given to them. Indeed, I do not admit, as mechanical poisons, glass, diamonds, the nails, &c., for these are only foreign bodies. In my opinion a mechanical poison is a substance which, introduced into the interior of the system, produces death by creating mechanical obstacles to the accomplishment of one or more of its functions. Inasmuch as these obstacles result from the metamorphoses of the substance which has penetrated into the organism,

by so much do they originate from them, and their production is provoked by the poison. It is thus that the selenites induce death in the midst of frightful asphyxia, and the blood is filled with a multitude of little crystals, sometimes as numerous as the globules. I am still ignorant of the nature of these crystals.

I have already developed my ideas upon the subject of mechanical poisons in a public course of toxicology, delivered at the School of Practice. I stated why I admitted three classes of poisons, viz: 1st, mechanical poisons; 2d, caustics or corrosive poisons; 3d, biological poisons. The tellurites and tellurates, as well as the seleniates belong to the first class.

As to the metamorphoses of selenites and seleniates, I can assert already that the compounds undergo a reduction in the organism. Indeed, having injected twenty-five centigrammes of seleniate of potassa into the veins of a dog, the breath of this animal, some hours after the injection, exhaled a strong odor of seleniuretted hydrogen. The oxygen compounds of tellurium would appear to undergo likewise a reduction in the organism. Indeed, Gonelin (*) having tried telluric acid on rabbits, states that the mucus and the feces were colored black by the reduced tellurium.

Conclusion of Unpublished Investigations.

BY DR. RABUTEAU.

1st. The *chlorate of potassa* is totally eliminated in its natural state. I believe that I am the first who has demonstrated this fact experimentally, by absolving chlorate of potassa and making a *quantitutive analysis* of the salt recovered in the urine. Möhler, as early as 1824, and subse-

(*) Husemann, *Handbuch der Toxicologie.*

quently other experimenters, amongst whom I would instance Justin and Isambert, had already recognized the passage of the chlorate into the urine. But doubts exist upon this subject. Some assert still, as at the beginning of the century, the metamorphosis of the salt into chloride; others, and I was of this number, believed that only a portion was reduced in the organism.

2d. *Chloric acid* in very weak doses is eliminated in the state of chloride.

3d. *Perchlorate of Potassa* is eliminated totally in its natural state. Its elimination is as rapid as that of the chlorate.

4th. The formiates and the succinates are transformed in the organisim into carbonates. It is possible that the succinates are transformed at first into malates, then into tartrates, and these finally into carbonates.

5th. Caprylic alcohol, introduced into the digestive tube, is recovered in the urine unchanged, or perhaps in the state of ether. I believe that a comparative investigation of all the alcohols, with reference to their mode of elimination most easy to determine, would throw much light upon the mode of elimination of ethylic alcohol and ordinary alcohol. *Sulphate of soda* injected into the veins in the dose of from seven to fourteen grammes, constipates and arrests thirst. The elimination by the urine, after the injection of fourteen grammes of sulphate of soda continued during two days and a half.

7th. *The hypo-sulphates of soda and magnesia* injected into the blood or ingested into the digestive tube, are eliminated principally unchanged, introduced into the blood they constipate; absorbed by the digestive tubes they act as mild purgatives.

8th. *The sulphites* are transformed into sulphates from the moment when they penetrate into the organism. Polli has already observed this metamorphosis; according to him, sulphites are found in the urine the first day, but on the second day sulphates are recognized. I determined that the salt is *eliminated totally in the form of sulphate* if the dose has been small.

8th. The *hypo-sulphites* are transformed into sulphates, and their metamorphosis commences from the moment when they have penetrated into the organism. Kletzinsky has already observed the transformation of the hypo-sulphite of soda into the sulphate.

Investigations into the Semen of Old Men.

BY A. DIEU, PHYSICIAN A L'HOTEL DES INVALIDES.

Observations have been made upon one hundred and five old men, aged from sixty-five to ninety-seven years. Beyond the age of eighty-six no spermatozoa have been found; but he accepts the case of Casper, who discovered them in a subject of ninety-six years. In sixty-four cases there were no spermatozoa in the seminal vesicles.

Sangnineous globules are frequently detected in the contents of the vesicles, traces of recent hæmorrhages, or masses of coloring matters which are the results of old hæmorrhages.

The greater part of the maladies of the reproductive organs, and of the secretory apparatus of the semen, do not appear to have any influence upon the generation of spermatozoa; however, they were absent in cases of voluminous hydrocele of the cord, in cases of voluminous varicocele, or further in indurations of the epididymis.

In a medico-legal aspect, the author considers that the existence of spermatozoa, and consequently the possibility of fecundating, may be met with in subjects no longer capable of erections.

EDITORIAL.

Delay.

We trust our friends will bear with us a little longer, when we hope to bring the publication of THE JOURNAL promptly up to its date. Our personal avocations have been so pressing, that we have scarcely found time to inspect the piles of manuscript which are transformed into our printed pages. The close of the college session, we trust, will afford us more time to devote to editorial work. Meanwhile, the character of the original matter furnished by our numerous correspondents, is such as to render us satisfied, that the editorial pen is not absolutely needed to sustain the interest and importance of the contents of THE JOURNAL.

Rush Medical College Commencement.

Postponement of the issue of the present number enables us to announce the occurrence of the Annual Commence- of Rush College, closing the most prosperous session it has ever enjoyed. In default of time we "scissor" the report made to the *Times:*

The 26th Annual Commencement of Rush Medical College took place in the lecture room of the institution, on the corner of Indiana and Dearborn streets.

The exercises were opened by a prayer by Rev. Dr. Erskine, after which the President of the College, Dr. J. V. Z. Blaney, delivered the usual charge to the class. The address abounded in good advice to the young men who formed the graduating class. At the conclusion of his remarks he presented the diplomas to the graduating class.

THE GRADUATES.

The following are the names of the class: William H. Austin, James M. Adams, M. O. Baldwin, Russell Broughton, Thompson R. Brady, Frank L. Bradley, John W. Bacon, Hiram H. Bardwell, Samuel H. Birney, David J. Brookings, Robert Briggs, William M. Burton, Robert H. Brown, Simon P. Brown, Arthur B. Brackett, Gallaudet O. Bailey, James Baker, Cassidy Chenoweth, Thos. Crossgrove, William G. Cochran, Israel Cunkle, John J. Cameron, John P. Cloyd, Nelson H. Church, Amos A. Covalt, James G. Cameron, Mauritz B. Carleman, Joseph W. David, William A. Danforth, Wm. Dunlap, Michael Donnelly, Cyrenus A. David, Arthur W. Edwards, James H. Ethridge, Frank M. Elliott, John W. Firkins, Ezra K. Friermood, Gustav H. C. Fricke, Lee W. Fulton, James R. Fyffe, William A. Gordon, Oliver Gard, Joseph B. Galer, Job L. Gregory, Charles W. Goodale, James E. Groesbeck, Julius F. C. Hoffman, John B. Hamilton, Herbert S. Hill, William C. Hoover, Melancthon Hilbert, Charles E. Hogeboom, James R. Holgate, William C. Johnson, John M. Jenkins, Peter E. Kierland, Andres Klingberg, Joseph Knowles, Jahiel C. Kilgore, Frederic H. Linde, Justin J. Leavitt, Hugh E. Lindsay, George W. Lee, Jr., Augustus R. Logan, Joel W. Morris, Russell L. Moore, Stephen P. McClure, Adam E. Miller, Andrew J. Miller, John McGinnis, John C. Morgan, James M. McLean, Samuel McClellan, Jas. S. Moffatt, Wm. Monroe, Wmilliam F. Nichols, John E. O'Brien, Lorenzo Northrup, Almon Patterson, Thos. W. Parker, John B. Ralph, Robt. N. Rickey, Harley G. Ristine, George W. Roberts, Vincent H. Rose, George W. Stewart, Frank D. Stannard, Wm. H. Schrock, Alonzo B. Shepard, Byron N. Stevens, Fred. F. Sovereign, Chas. C. Sprague, Joshua B. Sprague, Thomas B. Spaulding, Albert R. Tucker, Dallas G. M. Front, Sylvester Thompson, James Tweddale, William L. Underwood, William H. Wirt, George H. Walker, Solon

C. White, Otto B. Will, Basil M. Webster, George Williamson, John Williamson, Frank S. Wadsworth, John L. Whitley.

AD EUNDEM.

Frederick L. Matthews, M. D., of Illinois; Thomas R. McInnes, M. D., of Ontario, Canada; Robt. Tobey, M. D., of Ohio; John S. Clark, M. D., of Illinois.

HONORARY.

Oliver Everett, M. D., of Illinois.

After the reception of the diplomas the address was responded to by Dr. Williamson, a graduate of the college, in a short address, which was well received by the audience.

ADDRESS OF DR. ROSS.

Professor J. P. Ross delivered the valedictory address.

He gave a short but interesting account of the growth and progress of Rush Medical College from its foundation to the present time. He referred to the proud history of medicine in the world; to the long line of eminent men who have graced its ranks, and then proceeded to give the class some hints in regard to the means of making themselves most useful in the profession in which they were about to embark. He reminded them that they would find that the knowledge they had obtained was largely theoretical, They must perfect themselves by careful observation and practice New cases of study will present themselves. The cultivation of the senses to obtain the phenomena of disease, and the cultivation of the reasoning powers by which the facts presented through the senses may lead to a correct mode of the treatment of disease. To be successful they must determine to be students for life. This is the only way to become eminent. Without study a physician will soon find himself at the bottom of the therapeutical ladder. They must discard all inducements to neglect study. The speaker referred to a young man in the present class as a model of industry and perseverence, and predicted for the person, who remained anonymous, to most of the audience, that within ten years he would stand at the head of the profession he had adopted. Dr. Ross reverted to the revelations of science, and said they were developing the science of medicine with remarkable rapidity. In conclusion, the speaker urged upon his hearers the necessity of the adoption of correct moral principles. They should not make self-interest their great aim. At the bedside of the dying they should be able to offer the consolations of the purest religion.

The exercises closed with a benediction by Rev. Dr. Erskine.

MARRIED.—Feb. 1st, at the residence of the bride's father, Hon. D. Smiley, of Albany, Wis., by the Rev. G. R. Patton, of Inda, Wis., R. BROUGHTON, M. D., (of the class of 1869 at Rush), to MISS JULIA A. SMILEY, of the former place.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—FEBRUARY 15, 1869.—No. 4.

TRANSLATIONS.

TRANSLATED EXPRESSLY FOR THIS JOURNAL, BY W. HAY, M.D., ASSOCIATE EDITOR.

Memoir upon the Peripheral Terminations of Motor Nerves in the Animal Series.

BY S. TRINCHESE—FROM LA GAZETTE MÉDICALE.

Conclusions.—1st. In all the animals in whom it has been posssible to study the terminations of the motor nerves, there has been discovered a special organ termed motor plate (plaque motrice) at the extremity of the *axis cylinder*.

2d. The union of the nervous element with the muscular fasciculus is accomplished in the following manner:

When the muscular fasciculus is provided with sarcolemma, and the nervous element with its sheath, this latter is fused into the envelope of the primitive muscular fasciculus at the point where the nervous element meets the muscular fasciculus. At this point, or a little in advance of it, the medullary substance terminates, whilst the *axis cylinder* pursues its way, and penetrates into the motor plate.

3d. The motor plate is placed under the sarcolemma. It ordinarily presents the form of a cone whose summit is directed toward the nerve tube, whilst the base rests upon the primitive muscular fibres.

4th. This plate is formed of two layers superposed and very distinct, especially in those animals provided with large plates. The substance of the superior plate is granular: that of the lower layer is perfectly homogeneous, and is probably nothing more than an expansion of the *axis cylinder.*

5th. Within the thickness of the third granular layer of the plate, is found in the torpedo, a system of canals in which the *axis cylinder* ramifies, forming a network with large meshes. These canals are limited to a sheath which constitutes their walls.

6th. When the muscular fasciculi present central canals the granular substance of the plate is continuous with the granular substance contained in these canals.

7th. In animals provided only with slender muscular fibres, the *axis cylinder* traverses the granular substance of the plate by subdividing into two filaments which terminate in points with two extremities of the contractile element.

8th. Everything induces the belief that each primitive muscular fasciculus possesses but one motor plate. In this latter one or more nervous elements originate from the subdivision of the same nervous tube.

9th. The diameter of the motor plate augments in proportion to the size of the primitive muscular fasciculus.

Pathogenesis.

CONTAGION OF PHTHISIS PULMONALIS.

La *Gazette Médicale* of Paris publishes the following paper read by M. Chauveau before the Academy of Medicine, entitled: *Application of the knowledge of the conditions of infection to the study of the contagion of phthisis pulmonalis.*

Demonstration of the virulence of tuberculosis by the effects of the ingestion of tuberculous matter into the digestive canal. Corollaries relating to public and private hygiene.

Impressed with the idea that if tuberculosis is a virulent affection, it should be capable of communication, almost infallibly, by the digestive canal, by reason of the exceptional facilities which would exist for the administration in enormous quantities, of the vehicles of the virus.

M. Chauveau has undertaken some experiments designed to determine this important point, and primarily he desired that the experiments should be upon a species of animals in which tuberculosis was a very common natural disease, characterized by all the gravity which it presents in the human species. His choice was therefore fixed upon the bovine species. In order not to experiment upon subjects already infected, he selected young animals; three heifers of from six to twelve months old, born and reared in freedom from all the conditions favorable to the natural development of phthisis, and a fourth heifer likewise healthy and designed to serve as a standard of comparison, not being intended to be submitted to experiment.

By the aid of a bottle and by little mouthfuls, about thirty grammes of tuberculous matter, diluted with water, and extracted from the lungs of an old phthisical cow, at the termination of variable periods, but not exceeding three weeks, these animals fell into a dying condition, after having presented all the evident signs of tuberculous affection. They were sacrificed fifty-two days after the beginning of the experiments, and at the autopsies beautifully developed lesions of generalized tuberculosis were found, with extremely marked predominance in the mesentery and the intestine.

The lungs were studded with tuberculous masses in a crude state, whose volume varied between that of a pea and that of a large filbert. As to the heifer used as a standard of comparison, although living in the same hygienic conditions she remained unaffected. The principal conclusion

which M. Chauveau draws from these facts, is that "animals of the bovine species contract tuburculosis by digestive infection, as they take charbon and vaccine, as the sheep takes foot-rot, as the solipeds take glanders, as man takes variola, etc., etc."

The author concludes by indicating the important consequences which are deducible from these experiments:

1st. They place beyond all doubt the virulence and the contagious properties of tuberculosis, and demonstrate that the labors of M. Villemin upon the subject have not been recompensed as they deserve.

2d. The digestive tube in man constitutes, as in the bovine species, an avenue for contagion most appropriately arranged for the propagation of tuberculosis, and which may be much more frequently in operation than the pulmonary tract.

3d. If bovine tuberculosis belongs to the same species as human tuberculosis, there exists in alimentation by butcher's meat taken from phthisical animals a permanent danger to public health, a danger to which the army and the poor classes are exposed, and against which it would be important to establish measures of sanitary police.

M. Colin:—I desire to speak one word in reply to the communication of M. Chauveau relative to the transmission of charbon and of tuberculosis by the digestive canal. Three years ago I made experiments upon dogs, giving them to eat the flesh of sheep affected with charbon, and not one of them was sick. Rabbits submitted to the same alimentation have not had diarrhœa. These experiments confirm those of Renault; so that I do not believe that charbon can be transmitted by the digestive tract. It can happen only when there may be in the mouth, or in some other portion of the digestive mucus membrane, a wound, a solution of continuity which absorbs the virus; in my opinion it is a true inoculation which is produced.

The mode of transmission by the alimentary canal would be still more inexplicable for tuberculosis. I have also

made experiments upon dogs and upon rabbits. I fed to a dog an entire lung which contained not less than two or three kilogrammes of tuberculous matter; he suffered nothing therefrom, so that I see in M. Chauveau's fact only a simple coincidence. Animals sold for experiment have frequently a form of phthisis, intestinal phthisis. The digesmucous surface, and the patches of Peyer are stuffed with tubercles; a smaller number are found in the lungs. On the other hand the animal observed by M. Chauveau became phthisical only twenty days subsequent to the ingestion of the tuberculous matter. Now this is not characteristic of the progress of tuberculosis; this is not what happens, for example, when tubercle is inoculated into the cellular tissue. Indeed, several weeks are necessary to see the phthisis develop itself. Therefore, I do not believe that tuberculosis is transmissible by the digestive canal.

M. Chauveau:—I am astonished at the objections of M. Colin; they show that he has not heard the reading of my paper, and that he is not acquainted with the experiments of Renault. My paper, in fact, comprised three facts, and not one alone; the animals submitted to experiment were young heifers and not old cows; they were healthy and not sick. The coincidence is doubtless possible, but it would not be probable. I shall leave the Academy to decide this point. Relative to the transmission of charbon by the digestive tract Renault at first made negative experiments, it is true, upon dogs: but it is well known that this animal is refractory to diseases of this character (charbon). In 1851, in a work communicated to the Academy of Science, Renault stated that he had undertaken similar experiments upon herbivora, the horse, the sheep and the ox, and he affirms that he had transmitted charbon to these animals, likewise. Other experiments had conducted him to the same results with the virus of glanders.

CORRESPONDENCE.

Clinical Surgery in the Paris Hospitals.

PARIS, Jan., 1868.

In the service of Mr. Maisonneuve of the Hotel Dieu, saw a man, aged about 50, having an inguinal hernia descending into the scrotum, making it the size of a boy's head. The clever surgeon, immediately on seeing the patient, tapped the tumor slightly with his finger, and, in an instant, made the diagnosis by the sound thus produced. This sound resembled that produced by gently tapping a moistened bladder filled with air. The surgeon's ear once accustomed to it, he has no need of manipulation to make his diagnosis. Calling for a caoutchouc band, three inches wide and about three feet long, he first encircled the neck of the hernia so closely as to prevent the herniary aperture from dilating or bursting; then, with considerable force, enveloped the whole hernia, thus producing a strong pressure. Immediately one could see the tumor forcibly diminish, and within five minutes the greater part of it was reduced. A little gentle taxis completed the operation. This surgeon declares he never saw even a strangulated hernia that he could not reduce with this india-rubber band. which he always employs if he considers the various hernial parts are not too much diseased to contra-indicate reduction.

Although it may seem useless to refer to the long disputed question of a specific cancerous cell, yet, many a practitioner may be pleased to know the opinion expressed this week by so distinguished a man as M. Maisonneuve; a surgeon who probably sees and treats more tumors, called cancers, than all the rest of the surgeons of Paris combined.

Safely can I say that one can never pass through his

wards without finding at least a dozen unfortunate beings thus affected. For M. Robin, Professor of Histology, at the Medical Faculty of Paris, the word cancer has no signification, and ought to be obsolete; for him, this so-styled specific cell does not exist, and what has been so considered are only the various phases of morbid development of several different kinds of cells. M. Maisonneuve, at his last lecture, declared that he could not agree with M. Robin when saying there is nothing particular in a cancerous tumor. This surgeon of the Hotel Dieu said, that within fifteen years he had operated on many of these tumors, examined them with the microscope, taken notes of them, which he had put aside. That one day, while reperusing these notes, he had seen that the tumors having a particular cell relapsed within a certain time; and for him they were cancers. That whenever he saw this form under the microscope, he was sure the patient had not more than five years to live, and that the poor creature would have all the symptoms of a cancerous cachexia.

If he saw this form he was quite sure of a final recovery.

If this form, which was formerly considered cancerous, he knew the tumor would not produce the cancerous cachexia.

If he saw the tumor to be an epithelioma, he knew it might relapse at its primitive situation, or in the neighboring ganglions; but, that there would be no cancerous cachexiæ, no cancerous generalization. That, as a general rule, the true cancer usually relapses within three years, and always within five years. That one should operate whenever he saw, by so doing, he might relieve the patient's sufferings for a certain period. In the most of his operations he does not employ the bistoury, but a wedged-like, solid *arrow* as he calls it composed of chloride of zinc and wheat flour, equal parts, water *q. s.*, which he will introduce into any part of the body to a depth proportionate to the tissue affected.

These arrows (fliches) are about three inches long, one-sixth of an inch thick. At the base two-thirds of an inch wide, the apex pointed.

I have seen him remove, by this method, parts of the uterus; often a whole breast; half of the maxillary inferior, parts of the maxillary superior; the bones of the nose, etc. He thrusts them into a part by first making a deep incision merely the width of an ordinary bistoury. The part resting above the surface is cast off, and then the whole is covered with dry lint. About ten days after their insertion an eschar comes away taking all tissues affected for half an inch beyond the surface of the caustic.

By this method he proclaims to avoid, as a general rule, hæmorrhage, erysipelas, and purulent infection. In by far the greater part of his operations such is the case. Often have I seen him successfully operate on poor creatures whom many a skilful surgeon had refused an operation, and would not dare to touch, fearing from the nature of the parts affected, and from the extent of the disease, that the patient would expire in their hands before they could terminate their attempt.

Suffice it to say that although M. Maisonneuve and the Faculty of Paris are not friends, yet I have seen some of the best Professors of the Faculty occasionally employ this method.

For dressing various wounds and operations, Maisonneuve employs the Tincture of Arnica, which he considers to prevent inflammatory action, the Arnica root long having been esteemed as a preventative to purulent infection; glycerine, which Trousseau had long considered beneficial in superficial skin affections, and which Bazin has long praised in the treatment of eczema, zona, ichthyosis and in other skin diseases; French aromatic wine; dry lint, or lint saturated with the different substances here mentioned; carbolic acid, everywhere admitted to prevent fermentation, and consequently, putrefaction, which is a consequence of

it. Phenic acid is more often used for dressing than any other substance in his service.

Pieces of linen perforated by many small holes, and covered with a thin layer of cerate, which is seen in so many of the surgical services of Paris, Maisonneuve uses no more. In regard to this latter point I think this clever surgeon has shown sensibility to abandon it; for, let me ask, what good can simple cerate, composed of three parts of sweet almond oil and one part of pure white wax, do, aside from keeping air from a wound? It is well known that simple cerate becomes rancid very promptly, and then has an irritating action. If one chooses to employ medicated cerates, such as the cerate of belladonna used in England, antiseptic, antiherpetic, antisyphilitic cerates, in which the simple or Galian cerate is a mere vehicle, then we see there is a direct object in view. In this letter, Mr. Editor, I intended to have spoken of a new kind of splints for fractures, and of a useful apparel for amputations, employed by M. Maisonneuve, but I find there is no room.

Yours Truly,

A. W. Bosworth.

Our California Letter.

San Francisco, Cal., Jan. 13.

Dear Editor:—I promised you some leaves from my note book on the Pacific coast, and after a sojourn of only a few weeks find myself charged with material for at least a dozen pseudo-professional letters.

Among the California pioneers one soon comes to feel that to reach San Francisco by one of Pullman's sleeping cars will be an inglorious mode of entering the country. As the German said to his newly-arrived friend—"Coom'd you de isthmus mit?" "Nein." "Oh! den you coom de blains across?" "Nein." "Vy! den you cooms de Horn

around?" "*Nein.*" "Vot a dricks! *Den you no cooms at all!*" Transit by cars, sleeping one half the time, eating and reading newspapers a good part of the other half, always on the wrong side when anything is to be seen; however desirable in a commercial point of view, this will be loss of many of the chief advantages of travel. Give us rather the prairie schooner, or the long sea voyage, from which the Golden Gate opens suddenly into a land of promise and delight.

In that part of the earth created and furnished expressly with reference to our noble profession, *Central America*, I lingered only long enough to resolve to visit it again, with full leisure to observe the diseases born of the over luxuriance of nature; and the vast supplies of remedies, as yet only half developed, with which it is stored. No doubt a more faithful study of indigenous practice would give many valuable hints for the successful treatment of those destructive miasmatic fevers which have so long baffled the enterprise of connecting the oceans, and but for which thriving cities would take the place which squalid Aspinwall and sleepy Panama now occupy on the map of the world.

The popular idea that either of these localities are eminently breeding-places of the Panama fever is, I think, an erroneous one. The fact is, the whole country, from shore to shore, least of all where exposed to the ocean breeze, is reeking with miasm, and a rapid journey of less than four hours, in clean, well-ventilated cars, in the day time, and at the most favorable season of the year, will often be followed by an attack. Several of our ship's company who did not indulge in tropical fruits, or in sight-seeing at either terminus, suffered, some of them after their arrival at San Francisco. In the greater number of cases there has been imprudence in diet, and exposure, but the confinement of the ship, and change from ordinary habits of living are in themselves sufficient predisposing causes.

The natives of the Isthmus, especially the American of unmixed blood, have little to fear from anything but exotic diseases. When the fever seizes them, they take a heroic dose of the Jatropa or Physic Nut, and follow this with liberal potations of "Copatchi," an infusion of bark in Jamaica rum, which produces exactly the effect of quinine. This excellent medicine is offered for sale upon the cars, but I am sorry to say that the majority seem to prefer it without the bark. An old medical friend who has practiced, and been practiced upon, for some years in Guatemala, informs me that he repeatedly conquered attacks of fever by violent exercise, literally running for his life, and following up the profuse perspiration thus induced with the aforesaid bitter infusion. He became thoroughly acclimated not only to fever, but to the scorpion, tarantula and "Tommy Goff," not to mention certain winged abominations which drive even naturalists out of the country.

Perhaps it is well that the sinuous strip of tropic land in our hemisphere should remain undisturbed, to show what nature can do in the vegetable line.

Man seems a pigmy in the presence of these mighty forms. The stately colonades of palm, the lofty ceibas and mahogany trees with their hanging gardens of parasites, and the infinitely varied luxuriance of undergrowth, defy the best attempts of pen or pencil. They must be seen to be realized, and with sight comes the conviction that the outward senses are not strong enough, nor the spiritual senses fine enough to apprehend their beauty. The marvel of the tropics is the "silk cotton tree," which often grows to the height of ninety feet. Its giant stems are used by the natives for canoes, and as it branches near the top, and throws out long and massive limbs, it is, in the flowering season an enormous flat bouquet, an ærial field of fine carnation relieved by the deepest green.

The banana, which in a given extent of ground affords forty-four times more nutritive material than the potato, and one hundred and thirty-three times more than wheat,

seems the most appropriate symbol of lands so rich in food, medicine, precious woods and gums. Were I a believer in "similia similibus" I would not trust to the efficacy of counter effects as a protection against the dangers of these *drug* forests, any quarter-section of which will furnish aloes, copaiba, cassia, camphor, dragon's blood, ipecac, jesuit's bark, and musk enough to freight a ship.

Precious gifts have they also of spices (pimento gordo and cassia), of frankincense and myrrh; one cannot but wonder that some enterprising Yankee has not established a manufactory of pure extracts in Central America.

We arrived in San Francisco too late to enjoy the earthquake, or to verify without some painstaking the reports we had heard of its ravages—the Franciscans like the Chicagonese think more of the good name of their city than of their personal convenience or safety.

A peculiar physical sensation, not unlike that of fear is admitted to have prevailed during the month of October. It affected the appetite and circulation, and even the locomotive organs; furnished no end of "items", and gave way in the public mind to the "small-pox", which could not and would not be treated as a freak of electricity. Many minds that gravely doubted whether the influence which sent the chimneys over into the streets, and church-steeples crashing down upon the pews, was the result of any action upon or below the earth's crust, were impressed by a fear that the advent of a new disease imported direct from China would prove dangerous if not watched over by the proper authorities. Yellow flags signified, in a very timid and deprecatory manner, the presence of infection, while the plague spread until the infection of nearly every precinct made the most stringent measures necessary. There is no disguising the facts that the mortality from small-pox during the three last months in San Francisco has been appalling—and that a larger number than is usual of fatal cases have been vaccinated, and not unfrequently have had the disease before. It has not raged particularly

among the Chinese—they have not suffered as much as the poorer classes of other nationalities. It has been claimed by the papers that the Chinese doctors have been far more successful than others in their treatment, which I can believe, knowing one of their fundamental principles is that "disease proceeds from imperfect irrigation of the body." Why any body should be imperfectly irrigated in this city is not so clear, the most abundant facilities being offered. It is rather difficult to find out exactly what the Chinese mode of treatment is, but as the epidemic is abating, and Doctor Liang Wantai Scincang, (which being interpreted signifies "terrace of letters,") speaks the English tongue. I hope to understand the rationale of it. If what Remusat says of this singular people is true—"instead of studying the organization of bodies they undertake to determine by reasoning how they ought to be"—one would expect a kind of metaphysical treatment consisting in "wholesome letting alone," and in this possibly lies the secret of success.

Like other highly civilized nations the Chinese have their opposing schools of medicine, and these are well represented among the Anglo-Chinese. Drs. Chan Lin Phory, Chong Po Chi, and Hab Ling, possess the credentials of the Hanlen Quen or Imperial Academy, have a large practice, and may yet appear as delegates to the National Medical Association.

The smell of carbolic acid reminds us often of old Philip Frenau's verse—"Safe in the atmosphere of scents."* Much of the article offered for sale has nothing genuine except the smell. The accomplished President of the Catholic college at Santa Clara, as erudite in chemistry as in theology, offered to us the genuine "Phenic," pure as the best French processes could make it. With him and his army of bright, intelligent boys we have spent our pleasantest hours in California. Nowhere else have we seen science so entirely pervading the system of education. Of the honorable fraternity of teachers and doctors in the Golden State we shall speak in another letter.

E. S. C.

* "On prancing steed, with sponge at nose,
From town behold Sangrado fly.
Camphor and tar, where'er he goes,
The infected shafts of death defy—
Safe in an atmosphere of scents,
He leaves us to our own defence."

PHILIP FRENAU, 1793.

ORIGINAL COMMUNICATIONS.

Puerperal Metro Peritonitis.

BY J. W. DORA, M. D., MATTOON, ILL.

I was summoned Jan. 9th, 1869, to see Mrs. S., aged 30 years, who was three months advanced in pregnancy—the fourth time—she having given birth to two living children and had suffered one abortion ten months previously.

I learned from the patient that she had received a fall some nine days before, from a height of several feet, falling upon the abdomen, which had produced symptoms of approaching abortion. She had suffered pain in the back and loins, with slight chilly sensations, and febrile symptoms, such as headache, loss of appetite, constipation, etc., from the date of the fall.

Upon examination I found a very offensive muco-sanguineous discharge from the uterus, and learned that she had the day previous suffered from severe and protracted rigors, followed by fever. Also several hard chills, with imperfect reaction during that same day previous to my call, with some slight labor pains during the afternoon.

And while I was examining the patient there was a return of the rigors which were protracted more than an hour, presenting all of the alarming symptoms of congestive chills. I found the abdomen very much distended with flatus, very tender and painful; could not endure the slightest pressure, not even the bed clothing to rest heavily upon her; urgent thirst, pulse 120, corded and intermittent during the rigor, but became full, frequent and throbbing. After reaction was partially established, there was hiccough, frequent eructations, retchings and vomiting. Morphine and hot brandy were freely administered during the rigors, and at 8 o'clock P. M. reaction was well established, when fever supplanted the rigors with great violence, the labor

pains were augmented, and at 12 M., the embryo was expelled, leaving the placenta within the contracted os uteri, which I succeeded in removing, partially, with the placental hook. The placenta being already decomposed rendered it impossible to remove it entire. The hœmorrhage was slight and principally retained, as the uterus and its appendages, together with the peritoneum were already inflamed, there was, consequently no expulsive force left in the organ to enable it to throw off its putrid contents, but the patient being considerably under the influence of anodynes and stimulants, she rested pretty comfortably for several hours, until the next morning, I adjusted a wide bandage tightly which contributed to her comfort.

10th. Called at 9 o'clock A. M., and found the patient feverish, etc., but I was hopeful that the case would terminate favorably by resolution within a day or two.

I prescribed :

℞. Quinine : gr. xx ;
Sulphite Soda : ℥ ss :
Morphiæ : ℥ j ;

F. & Chart No. 8, Sig., one every two hours, and ordered hop fomentations to the bowels. Called at 3 P. M. and found the symptoms altogether aggravated. I found before me a malignant and well-developed case of Metro-Peritonitis, complicated, as I afterward discovered with Pelvic Cellulitis.

SYMPTOMS AS FOLLOWS :

Tongue coated dark brown, and dry; thirst insatiable; pulse 140 per minute, full and bounding; skin intensely hot; abdomen tympanitic, tender and painful to the touch, with excruciating throbbing pain low down in the sacral region, from the cellular inflammation, producing that peculiar intolerable tenesmic pain experienced in dysentery. There were profuse, offensive mattery discharges from the bowels at this time, which changed in a few days to dysenterio-muco-purulent character of discharges which were frequent and still very painful. There was head ache, flushed

and cyanotic appearance of the countenance, with an anxious expression. A very offensive, cadaverous odor attended all the secretions and evacuations; there was also partial suppression of urine, with complete retention—requiring the use of the catheter to remove what little there was secreted.

TREATMENT.

But before I proceed to detail the therapeutic treatment of this case, I wish to ask the very pertinent question, and answer it, as I think, philosophically, viz: What is this puerperal, or metro-peritonitis, from puerperal causes? Is it an original local phlegmasia, and the constitutional disturbances simply effects, or is its starting point in the blood, a septicemia and the local lesions merely results? To be brief, as I shall not have space to discuss this question "in extenso," I am of the opinion that the disease under consideration is one of blood poisoning. I believe with Meigs, Ferguson, Bedford and others, that puerperal fever is a veritable toxæmia or septicemia, a ferment or morbific matter taken into the circulation by absorption of putrescent matter, generated within the organism of the patient, or conveyed thence through the principle of contagion from a third party by translation or inoculation. It may, therefore be sporadic or epidemic, produced by the absorption into the circulation of decomposing animal matter, contained and retained within the uterus for a period of nine days, perhaps, after decomposition began.

There are, no doubt, in most all cases certain predisposing causes that contribute more or less to develop and excite these morbid influences within the animal economy, such as malarial, miasmatic and idio-miasmatic or any other depressing influence.

We find three indications to be fulfilled in the rational treatment of puerperal fever, viz:

1. The amelioration of the urgent symptoms, or the mitigation of pain and nervous irritation consequent upon the tympanitic distension of the alimentary canal and the local

engorgement of the metro-mesenteric vessels pressing upon an inflamed serous membrane.

The second and third indications are to neutralize the materies morbi from the circulating mass, then trust to nature to repair the local lesions which it is generally able to do under favorable circumstances, assisted by restorative treatment and nutritious diet.

In fulfilling the first indication in this case, the bowels having already been evacuated by a dose of compound cathartic pills before I was called, which was followed, as I have before said, by diarrhœa, was to adjust a bandage covering the entire abdomen, extending from the crest of the illium to the epigastrium, maintained in position by an abdominal supporter (Marsh's). And, allow me here to urge the great importance of this simple appliance. It acts like a charm in alleviating that feeling of bursting distention and pain, resulting from the passage of gas from one portion of the canal to another, besides it affords mechanical compression and support which every one knows greatly favors absorption when applied to any portion of the economy where there is an engorgement of its blood vessels. It also presents effusion into the peritoneal cavity; and it does not hinder the application of hot fomentations to the abdomen, at all, which I also kept constantly applied until the active inflammation subsided, after which I applied blister of the cantharidal vesicant over the umbilical and both illiac regions, which, I think, does much to avert local lesions of the ovaries and psoas muscles. I next proceed to the therapeutic treatment, proper in the case, believing, as I have heretofore said, that the case was septicemia. I therefore combined antiseptic with antiphlogestic and eliminative remedies in the beginning. I gave, viz :

℞. Acetate of Potassa: ℥ ij;
P. Aconite Folia: ℥ j;
P. Gelsimin: ℥ ij;
Spts. Nitri Dul.: ℥ jss;

Teaspoonful every two hours, in cold lemon acid, alternated with the following emulsion :

℞.	Sulphite Soda :	℥ ij ;
	Quinia Sulph :	℥ ss ;
	Tannin :	℥ xv ;
	Morph. Sulph :	gr. ij ;
	Emulsion of Acaciæ :	℥ ij ;

M. Sig. Teaspoonful every two hours. And ordered the following antiseptic and disinfectant injection both for vagina and rectum.

℞.	Sol Carbolic Acid :	℥ iv ;
	Oil Glycerine :	℥ jss ;

M. Add a teaspoonful to a pint of warm water and inject three or four times daily to both the vagina and rectum, to be repeated daily as long as the secretions were offensive.

11th. Nine o'clock A. M. Symptoms unchanged ; pulse 150 and weaker ; countenance anxious and icterous. Continued the treatment.

12th. Indications much the same. I withdrew the quinine from the emulsion and substituted alum terebinthina sufficient to give 20 drops at a dose every two to four hours.

13th. Prognosis unfavorable. Applied the blisters spoken of to the abdomen, and substituted McMunn's elixir of opium for the morphia in 15 drops doses, in the antiseptic emulsion. Continued the treatment otherwise. The diarrhea at this stage gave place to dysenteric discharges, on account of the extension of inflammation to the colon and rectum, also cellulitis was manifest. Upon examination of the rectum and vagina there could be felt quite a tumor, caused by effusion of sero-purulent matter into the cul de sac situated between the rectum and uterus, which tumor

found an outlet some 24 hours afterwards through the walls of the rectum.

14th. Tenesmic pains in the cæcal region are great, not quite as much tympanitis of the bowels, and symptoms more favorable. Treatment continued.

15th. Patient rested well during the night, but no appetite; recommended brandy with warm milk diet, with rare cooked eggs.

16th. Tongue moist and pulse down to 100 per minute, and she can turn herself on to the left side and straighten out the limbs for a few minutes, still thirsty, but has some relish for the milk and eggs.

17th. Pulse 80 and soft, with good volume; slept several hours during the day and night; bowels still tender, and suffers tenesmus, with, at times, severe colicky pains, for which I gave chloroform; emulsion in teaspoonful doses which had a very happy effect, and prescribed:

℞. Bismuth Subnit: ℥ ij;
Sulphite Soda: ℥ ij;
McMunn's Elixir: ℥ ij;
Emulsion of Acacia ℥ ij;

M. Teaspoonful every three or four hours.

18th. Bowels checked up. Continued the prescription, and in addition gave *hydrarg cum cret.* gr. iij, with half teaspoonful of calcined magnesia, night and morning.

19th and 29th. Patient much improved; the bowels act off more healthy, and appetite improving, but still slight irritative fever during the afternoon.

21st and 22d. There is marked improvement in all the symptoms except the rectal tenesmus and urethral irritation. For the latter symptom I prescribed infusion of uva ursi, with teaspoonful doses several times daily of *spts nitre dulcis* and continued the anodyne and antiseptic emulsion.

25th. Convalescence is well established; appetite good; bowels regular; pains abated; urethral irritation much less; diet and stimulants are relished very much.

30th. Patient rapidly improving. Prescribed the following restorative :

℞. Tinc. Cinchi. Comp : ℥ ij ;
Tinc. Gentian : ℥ ij ;
Pyro Phosphate of Iron : ℥ ij ;
Sherry Wine : ℥ viij ;
M. Tablespoonful every four hours and case discharged.

REMARKS.

There was a peculiarity in the fact of there being no return at any time of the lochial discharge, which became suppressed within a few hours after the expulsion of the embryo, no coagula ever passed, and very little uterine discharge of any kind after the fifth day. What became of all that morbid matter is a question; of course, it must have passed off by absorption, or else it found an outlet by way of the pelvic abscess of which I spoke in the early history of the case.

Super-Oxygenation as a Therapeutic Measure, with Notes of Cases Treated.

BY S. S. WALLIHAN, M. D., CHICAGO.

The relations of oxygen to animal life were early the subject of earnest inquiry.

The experiments of Priestley and Lavoisier demonstrated that birds, rabbits and other animals immersed in an atmosphere of pure oxygen gas were rendered more lively—as it were, stimulated, and that dogs trained for the chase, when allowed to breathe the gas for a short time, could endure greater hardships, and for a longer period, than their fellows who had not been subjected to its influence; and that animals suffocated from inhaling poisonous vapors were speedily resuscitated by a supply of pure oxygen.

It was also demonstrated that the muscles of the animals repeatedly subjected to the influence of the gas, became

very firm—toughened as it were, materially interfering with their quality of tenderness for dietetic purposes.

These striking results, naturally, attracted the attention of physiologists, and pointed to important therapeutic developments in the future. Considerable experimentation followed, with a view to make non-atmospheric oxygen available to the intelligent pathologist, in the removal of morbid conditions.

Dr. Beddoes—not "Eddoes" as quoted in the *London Lancet*—has the honor of having been the first medical man who gave any considerable attention to the subject. He was assisted by Sir Humphrey Davy; but great difficulty was experienced in adapting apparatus for the ready evolution of the gas in sufficiently pure condition for medical uses; and after long and painful effort, Beddoes declared himself beaten, not by any lack or loss of faith in oxygen, but "by the difficulties in making it available." His partial success, however, was sufficiently suggestive to inspire further efforts, and he was followed by Drs. Hill, Thornton, Cavallo and others.

Since the former ones were, by the general profession, considered a failure, the experiments of these late investigations were conducted in comparative seclusion, or were made the subject of uncharitable professional criticism and opposition.

Hence, Dr. Hill's work, published in 1820, although full of instructive and striking facts, attracted little notice and was soon forgotten. Few members of the profession, at the present day, are aware that experiments so conclusive were ever conducted, or that a work of such unusual candor and singular ability was ever issued.

Somewhat later, Thornton, Cavallo and McCormack instituted still more extensive trials of the agent, and each unhesitatingly commended it. Within fifteen years past, Richardson, Demarquay, Birch, Goolden, Francis, Alexander, Erichsen and others, have, more or less used, and without exception, added their testimony in approval of the treatment.

In this country, but few members of the profession, of any prominence, have given the subject attention, and the opinion still generally prevails that the inhalation of artificial oxygen, as a therapeutic measure, is of doubtful utility, and, in any event, difficult of accomplishment in general practice. This is scarcely to be wondered at, in view of the fact that literature on the subject is not only meagre but very unsatisfactory. Comparatively nothing on the subject has appeared in this country, and, as yet, no American publisher has had the courage to venture the republication of foreign works of the kind. The medical press generally, has ignored all mention of the subject; the notable exceptions including the *London Lancet*, and *British and Foreign Medico-Chirurgical Review*, in which some interesting cases, treated by means of super-oxygenation, have been reported from time to time, and articles on the same subject have occasionally appeared.

Our own Prof. Cohen, of Jefferson Medical College, in his recent work (*On Inhalation*, Phila. 1867), asserts with great positiveness, the value of pure oxygen in certain forms of disease in which he has used it or witnessed its use. Dr. DaCosta, in his monograph on the same subject, makes cautious mention of it as the "most promising" of all the gases, but dismisses the question of its use by saying, "we must wait the results of these later experiments, since the former ones were unsatisfactory."

Demarquay's reports to the Academy of Medicine, and *Gazette Médicale* (Paris, 1866), are quite conclusive and satisfactory, but have not yet been republished in English. The monograph of Dr. S. B. Birch, of Manchester Medical School, (Second edition, London, 1868.) is probably the most satisfactory contribution yet made to medical literature, on the subject of pure oxygen as a curative agent. The first edition of the same work, issued in 1857, was not well received by the English medical press, but was made the subject of considerable ungenerous criticism, and never found its way to this side.

This author, whose experience with oxygen, extending through a period of more than fifteen years, probably exceeds that of any other practitioner who has yet spoken—asserts, as his conclusions concerning the agent, that, "it is a powerful, really scientific and agreeable curative agent; is capable of far more extensive range in its application to the rational treatment of chronic diseases than, perhaps, any other remedy—*is permanently Nature's own therapeutic*, affording assistance in her own way, without opposing the intentions of her ever-present *vis medicatrix*, and is entitled to the position of a *curative*, in a variety of intractable diseases, otherwise incurable by any other known means, or tacitly acknowledged to be so; * * * is occasionally *the* remedy, and then the only one worthy of the name, in certain contingencies, where life must be (and frequently is) sacrificed by neglecting a fair trial of it." (*On Oxygen, pp. 148*). He adds: "It may with safety be predicted that, sooner or later, non-atmospheric oxygen will be universally admitted as one of our most valued remedial agents. (Op. cit., p. 149.)

It would seem a notable lack of professional acumen or professional enterprise, that so little is known concerning the therapeutic use of this agent, and that so potent an ally in the treatment of disease should not long since have been made more generally available. But the difficulties of rendering it so in general practice have thus far, no doubt, deterred many from attempting its use, who otherwise would be glad to avail themselves of its aid. The impetus of late given to the subject, both in Europe and this country, bids fair to enlist the attention of the general profession, and to secure for the treatment, recognition adequate to its importance.

Of the various methods of exhibiting the remedy, which have been brought forward from time to time, the more practicable and important are,

1. Direct inhalation of the gas into the lungs, which is, *par excellence*, at the head of all other methods of administration. The gas may be generated by any of the processes

known to chemists, care being taken to secure a sufficient degree of purity.

The process by means of chlorate of potash and per-oxide of manganese, is, undoubtedly, the most practical and economical for ordinary purposes. It requires some sacrifice of time and care in its manipulation, and is, so far, objectionable to the busy practitioner; but the gas afforded by this process can be made of such absolute purity, and the apparatus required is so comparatively inexpensive, that it is to be preferred to any other.

A process for the evolution of the gas in a tolerable state of purity, by means of chloride of lime and per-oxide of cobalt, has lately been perfected by the Messrs. Robbins & Co., of London. It was originally proposed by Flitmann, but was not looked upon with much favor, since it required that the chloride should be in saturated solution previous to the addition of the cobalt, which seriously interferes with the portability of the material and its adaptability to emergencies. By some process of their own, which they very ungraciously decline to impart to any American chemist, the Messrs. R. & Co. manage to combine these substances, in right proportions, in the form of dry powder, which may be preserved any length of time, unchanged, and is ready for instant use on the addition of simple boiling water.

The per-oxide of hydrogen, in solution, raised to a temperature of nearly 100°, gives off limited quantities of perfectly pure oxygen; but this process is expensive and will be brought into requisition only when limited quantities of the gas are required, or when other methods are not at hand.

Per-oxide of barium and bi-chromate of potash, with diluted sulphuric acid, is another process for obtaining the gas, but scarcely to be recommended.

The decomposition of water by the galvanic current may, in time, become a more feasible and less expensive method than now.

(To be continued.)

Sun Stroke.

BY M. WATERHOUSE, M.D., PORTAGE CITY, WIS.

EDITORS JOURNAL:

From reading various articles in THE JOURNAL of the 16th December, upon the treatment of sun stroke, I am induced to communicate some of my own experience in that disorder. The theory of sun stroke seems to be laid down somewhat vaguely, as the effect of extreme heat on the nervous system in persons fatigued and of previously enfeeblee constitution. How far out of the way this definition may be, or what the particular indications for treatment would follow it, if any, I do not stop to inquire, but the remedies that have been tried are numerous and unsatisfactory, and in all ages and modes of treatment the head has invariably received the largest share of attention, notwithstanding that post-mortem examinations seldom furnish any evidence that the brain has suffered material injury, on the contrary, the lungs are nearly always found in a state of congestion.

My belief is, that in by far the greater proportion of cases, the effect of the heat is local and confined to the cervical and dorsal regions of the spinal cord. During the heated period of each summer, for a number of years past, I have seen a greater or less number of cases of sun stroke and noted particularly the mode of attack, and especially the position of the individual at the time, and so far as I can recollect, every person was so situated as to receive the rays of the sun more or less directly on the back, as for instance:

J. O., of Portage City, a painter by trade, aged about forty-five, of previously good health and strong constitution, was painting letters on the side of a railroad car with his back exposed to the direct rays of the sun, at about noon, suddenly felt his eyesight begin to fail, and in a few minutes fell down comatose, with slow, feeble pulse. Stertorous breathing and inability to swallow, and had a number of violent convulsions.

H. A., a carpenter, aged about thirty, a strong, healthy, vigorous man, was nailing siding on a house, with his back to the sun, at about two o'clock, P. M., suddenly fell down comatose, but no convulsions.

J. M., a farmer, aged thirty-two, of previously good health and constitution, was binding wheat in the harvest field in a stooping position, so that which ever way he was facing he received the rays of the sun on his back, and was attacked with coma and fell down at 3 o'clock, P. M., had no convulsions nor stertorous breathing.

Another man, whose previous health and habits I did not learn, was journeying through the country in a wagon, and sitting with his back to the sun, and could not have been very greatly fatigued, was seized with sun stroke and fell over in his wagon with coma, and more or less convulsions.

These cases, and about a dozen others that have fallen under my observatiou, all being attacked in similar positions and circumstances, were all treated alike, viz; by cups applied to the cervical and dorsal sections of the spine, followed with ice-bags to the same regions, and in every case with relief more or less promptly, and final recovery with *very little* other treatment. I have also noticed in examinations of invalid pensioners, whose disability originate in sun stroke, that besides being generally debilitated they have all more or less spinal tenderness, and some of them have habitual convulsions.

In regard to the lesions found in the lungs after death from sun stroke is it not probable that the cause is to be found in the effects of extreme heat upon those nervous centres that are most directly concerned in the function of respiration.

Now all this may nothing new to many of your readers, nor do I suppose that there is sufficient in the limited number of cases that I have seen to establish any rule that will apply to all cases, yet there seemed enough in them to impress me strongly with the idea of addressing my efforts to the spine, and to warrant me in giving you such thoughts as have occured to me on the subject.

FOREIGN ITEMS.

A New Method of Laryngoscopy.—Dr. Voltilini, in an article just published in the Berlin *Medicat Weekly*, affirms that the epiglottis and the interior of the thyroid cartilage can be seen without the aid of the laryngoscopic mirror. It is not necessary to press upon the tongue with the tongue-depressor, which obstructs the view, but to extend the tongue firmly outside of the mouth; at the same time it is necessary to press externally upon the thyroid cartilage with the fingers of the hand which holds the tongue, and to push the epiglottis forward by means of a little instrument designed for the purpose. The author maintains that he has been able in this manner, to see the thyroid cartilage, and that it is possible thus to explore the interior of the thyroid body, in an appropriate subject.—*Gazette Médicale.*

Animal Grafts—Dr. Montegazza refers to some interesting experiments, which he had made, upon animal grafting, and the artificial production of cells, and which he had recorded in a volume published in Milan, in 1865. In this work he investigated the changes which supervene in a tissue when it is transplanted, without having lost its vital properties, into the substance of an organism still possessing life. He applies the organs removed to an animal living in conditions most favorable to the preservation of their physiological properties; he interrupts only the course of the nerves and the direct communication of the vessels, he affects for them a reciprocal combat by means of the plasma, and he thus preserves the natural temperature, humidity, etc. By pursuing this method he has been enabled to observe in some tissues a very rapid fatty degeneration; in others he has established the preservation of physiological nutrition, whilst others still have continued to grow even beyond their normal limits; finally, in extremely rare cases, he has been able to demonstrate that not only the

nutritive faculty but the function, even, of the organ was preserved. The stomach has furnished him with the most striking example of the fact. He had observed that this viscus, isolated from all nervous and vascular communication, could preserve, during almost a month, the faculty of secreting mucus and of digesting; all the stomachs transplanted were distended by mucus, and in some it seemed that this accumulation would burst the walls. He effected artificial digestion as well in stomachs transplanted upon the same animal, as in stomachs transferred from one animal to another; but in the first, the digestive force was more energetic, and, what was very remarkable, it was even much more energetic than in two stomachs which had just been removed from living and well nourished frogs.

Desiring to renew these experiments, but prevented by other occupations, M. Marchioli, his assistant, assumed the charge of conducting them. Subjoined is an analysis of three of these experiments. In the first the stomach was removed from a living frog, on the 8th of January, and after having received a double ligature, at the cardiac and and pyloric orifices, it was placed in the abdominal cavity of another, very robust frog. Cicatrization occurred promptly: the frog continued in good health up to the 22d of January, when it died. Upon opening the abdominal cavity the engrafted stomach was found adhering tenaciously to the peritoneum, near the greater curvature of the stomach proper of the frog. Both were empty and contained but little mucus. The mucus of the two stomachs was scraped, and the pulp which resulted therefrom was placed in two little glasses, into which was poured five cubic centimetres of distilled water and a drop of hydrochloric acid.

Next the digestive power of the two stomachs was tested by placing them in contact with cubes of boiled white of egg, and a difference of forty-eight hours in favor of the grafted stomach was determined. The second and the third experiments were but repetitions of the first, and were followed by analogous results.

PROCEEDINGS OF SOCIETIES.

Proceedings of the Chicago Medical Society.

"SPONTANEOUS" DISLOCATIÓN OF THE LENS INTO THE ANTERIOR CHAMBER.

Dr. Holmes presented a crystalline lens, which he had extracted from the right eye of a young man, 22 years of age, a student in the Rush Medical College. In his infancy there was a marked failure in the development of the osseous system which produced considerable distortion of the ancle and wrist joints and of the sternum. As early as in the sixth month of his age, his parents had observed that he was extremely near sighted. From this time to his nineteenth year, he was very myopic, with almost absolutely no power of accommodation. In reading he was obliged to hold his book a distance of only three inches.

At the end of this period he observed that he could see distant objects with the left eye over the lens and near ones through it; on stooping he could see only very near objects. The lens had become slightly dislocated downward. Two years ago the left lens fell into the anterior chamber, while the patient was in the simple act of stooping. A surgeon replaced the lens behind the iris, by an operation with a needle. Severe inflammation with hydrophthalmus and final atrophy of the globe followed.

About a year ago there was a partial displacement of the right lens downward with the effects on vision as above described. On the 7th of October last, while stooping forward in his chair, the lens fell into the anterior chamber. With the lens in this position he could read the finest diamond print at the distance of two inches behind the cornea. The lens resembled a beautiful globule of air.

In consultation with Prof. Gunn, I was decided to extract the lens at once, before irritation supervened. There was

reason to apprehend, with the progressive atrophy of the zonula of Zinn, that there was also dissolution of the vitreous humor.

The lens was removed through an incision made with Graefe's knife, in the lower portion of the cornea, encroaching upon the limbus conjunctivæ, but not so far upon the sclerotic as in the modified peripheral extraction. As the knife traversed the anterior chamber, the lens was crowded into the upper portion of the anterior chamber, repressing the upper portion of the iris into the vitreous humor. As the aqueous humor was evacuated, the lower free border of the iris rose in front of the knife and was excised. The lens passed out spontaneously without the slightest loss of vitreous humor. The edges of the wound were in exact coaptation, as the lids were placed in position and the compressive bandages applied.

In ten days the patient was about his room with good vision, having suffered scarcely any pain from the operation. In a few days there appeared a minute transparent staphyloma in the apex of the cicatrix, just below the transparent borders of the cornea. The iris was not involved, as the globe was quite tense; it was thought best to make a minute opening through the staphyloma. Although no pressure was exerted upon the globe, and the patient suffered no pain to cause spasm of the muscles, a large quantity of perfectly limpid fluid, like aqueous humor, was evacuated. The quantity was such that there could be no doubt that a portion of it was the dissolved vitreous humor. Although the tension of the eye became very much reduced, the wound healed, and the eye was soon restored to its normal firmness, *without impairing vision.*

The patient returned home to an adjoining State, able to read or write without the use of a lens. Six weeks after the extraction he wrote a letter, as he stated, with as much ease as ever before in his life. That same night while on the cars he awoke almost totally blind. He discovered on palpation no loss of the intraoccular contents. He came at

once to Chicago in great pain. In less than twenty-four hours there was much œdema of the conjunctiva, and lids with quite a copious muco-purulent discharge, as if the patient was suffering from an attack of uncomplicated acute conjunctivitis. A delicate greyish membrane could be seen floating behind the iris in the inner and lower portion of the globe, which was, undoubtedly, a detached portion of the retina. No ophthalmoscopic examination was made on account of the severe pain. Violent inflammation continued nearly two weeks. The patient soon returned home, blind, with scarcely a hope that any subsequent operation could restore his vision. An examination of the refraction of the eye was deferred after the extraction of the lens, in expectation of the patient's returning to the city when the eye had perfectly recovered from the effects of the operation. Dr. Holmes also presented another crystalline lens which he had recently removed from the anterior chamber. The patient, 43 years of age, had received a blow on the left eye 25 years ago which nearly destroyed the vision. For twenty years there was a small white body lying *in* the pupil, a part of which projected into the anterior chamber. Five years ago, while in the act of lifting a great weight, the entire lens fell into the anterior chamber. During this period he had suffered frequent attacks of pain and irritation. For the purpose of relieving irritation with scarcely a hope of improving vision, the lens was removed, through an opening in the lower portion of the anterior chamber. The wound healed readily without any irritation. The lens was much atrophied, very hard and white in appearance, composed entirely of calcareous matter.

AMPUTATION AT THE SHOULDER JOINT.

Dr. Wanzer exhibited the fragments of the upper portion of the humerus which he had amputated at the shoulder joint, of a German, 51 years of age, whose arm had been crushed in a machine. The patient made a good recovery.

Dr. Bogue exhibited an ovum which had evidently been blighted, in consequence of hæmorrhage between the amnion and chorion. The clot of blood and the placenta could be easily traced. Neither the fœtus nor cord could be found. Dr. Bogue exhibited for Dr. Hutchinson a beautiful specimen of the neck of a tapeworm.

BOOKS RECEIVED.

OPTHALMIC SURGERY AND TREATMENT; With Advice on the Use and Abuse of Spectacles. By John Phillips, Optician and Oculist. Chicago: *The Western News Company*; *W. B. Keen & Co.*, 1869. Pp. 510.

The first portion of the book is a complete thesis on "the use and abuse of spectacles," and is eminently practical in its character, and we think well calculated to impart knowledge on a very important and much-neglected subject. It will bear careful perusal. The various inflammatory diseases of the eye naturally claim a large space. As a whole this work is well written, and especially is this the case in the chapters on scrofulous opthalmia, and conjunctivitis and its sequel, "granulated eyelid," the most frequent and by far the most obstinate "of the curable diseases to which the eye is subject." The various formula in this part of the work will be found valuable.

The chapter on diseases of the lachrymal apparatus (25 pages) is well written, and exhausts the subject. Due credit is given to Mr. Bowman for the introduction of his simple and successful operation of slitting up the puncta and canaliculi, and adopting a series of large probes in the treatment of obstructions and strictures of these passages.

The division of the work on opthalmic surgery is, of course, about the same as in other recent works on the same subject, but as no branch of surgery is more progressive than this, and improvements, both in instruments and the *modus operandi*, are constantly being made, it is something to say that this work is, in some respects, more comprehensive, and in advance of its predecessors.

The new work of Dr. Bader, just published in London, contributes a fair quota of valuable and reliable matter.

We notice that Dr. Trumbull's practice (introduced in 1837, and since fallen into disuse) of treating various maladies of the eye by exposing the organ to medicated vapors, is here strongly advocated, and we remember that Dr. Williams, of Boston, in his recent work, takes similar ground, especially in the treatment of asthenopia.

THE

CHICAGO MEDICAL JOURNAL.

Vol. XXVI.—MARCH 1, 1869.—No. 5.

TRANSLATIONS.

The Therapeutic Employment of the Fumes of Opium.

Doctor Armand, a military medical officer read, recently, to the Academy of Medicine, Paris, a paper under this title, expressing the belief that, medically speaking, the fumes of opium might be very useful. He refers to the declaration of Sydenham, that he would rather renounce the practice of medicine than the employment of opium. Not doubting that the illustrious English physician would have utilized the fumes of opium in the Chinese method had he been acquainted with it, the author continues: Indeed! after several years of experimentation, during which we employed the fumes of opium as a medical agent, we will not defer longer the publication of this very simple, inoffensive and very fruitful means to be directed against a series of chronic and neuralgic affections, especially of the chest.

But first, how should opium be smoked? With a special pipe, of which we give a description.

The stem of an opium pipe resembles a flute, having for its only lateral opening that of the mouth-piece. It is therefore a tube closed at one end, near which there is pierced, laterally, a circular opening, to which is adapted the neck of a pipe. This pipe has no resemblance to a tobacco pipe. It is formed of a sprinkling nozzle, having only a very small hole of scarcely a millimetre (.039 in.) in diameter in the middle of its slightly convex surface.

The pipe of baked clay of six or seven centimetres (2.24 to 2.73 in.) in diameter and four in depth, is hollow interiorly, and terminates in a neck of one centimetre (.39 in.) in diameter. These dimensions of the pipe, as well as those of the large tube, of at least fifty centimetres (19.4 in.) in length are determined in order to cool the smoke.

In order to charge the pipe, one or two grains of extract of opium should be taken upon the point of a steel needle.

This piece of the extract is to be applied to the flame of a lamp, in order to put it in a state of ebullition, and to give to it a sufficient degree of consistence to permit it to remain in a state of inflation.

This piece of prepared opium is then placed, very carefully, near the little central hole of the pipe, but without obstructing it, which is effected by means of the point of the needle, which is always held in the hand. This done, the central portion of the pipe is exposed to the flame of a lamp or candle. The opium assumes the state of ebullition, ignites, and this is the moment for the aspiration of the smoke, by a deep pulmonary inspiration.

The pipe is then withdrawn from the flame, the smoke retained for an instant in the bronchi, and thence returned by an expiration more or less prolonged, either through the mouth or through the nostrils. The point of the needle is then freshly inserted in order to maintain the opening of the central hole; the pipe replaced in the flame, and a new aspiration made. If in boiling, the opium which remains flows away from the centre, which happens if it is not sufficiently ignited, the point of the needle serves to replace it

before it has cooled. After the fourth or fifth aspiration all the opium will have been burned. The charred residuum may be removed with the needle, using it as a scraper, and it must be renewed if it is desired to continue the aspirations or rather the inspirations.

Indeed, a simple aspiration with the mouth (buccale), as with the tobacco pipe, would not suffice to burn the opium; it would scarcely suffice to introduce a little smoke into the mouth, which would avail nothing. The true method of habitual smokers, is to make not simply a buccal but a pulmonary aspiration; in a word a strong inspiration as prolonged as possible, filling the bronchi with air loaded with the fumes of opium. The smoke must then be inspired to the full capacity of the lungs, and this is the indispensable condition not only to burn the opium but to receive its effect.

It is necessary to observe carefully that the opium must not be ignited by the flame of a smoky lamp. Moreover, our oil lamps are worthless for this purpose, on account of the grease with which they contaminate the opium and load its fumes. The alcohol lamp irritates the throat and the bronchi; carburetted hydrogen gas as well as petroleum are mephitic.

At Singhapour the virgin oil of cocoa is used in the lamps for burning opium. By analogy we have tried the oil of almonds, but even, this was too smoky, and we now prefer the flame of a wax candle simply.

Among other physiological and therapeutical effects of the fumes of opium, we will mention the following: a person in good health who smokes opium for the first time, finds the smoke agreeable and pleasant to the taste and smell. From the first pipe he is a smoker; and except while making a very violent inspiration, the smoke of opium never occasions cough. This fact is very important in a therapeutic point of view.

Now, how many grains of opium can an adult smoker burn without being perceptibly affected? At the beginning

of our personal experiments we investigated this point of the question frequently, and can affirm that before having burned fifty centigrammes (about 10 grs.) of opium, we were never affected sensibly. Beyond that quantity there was general heat, and during sleep there were dreams anything but agreeable, and approaching to nightmare.

Have we, therefore, become an opium smoker? Assuredly not; the smoke of opium, though agreeable, had not for us irresistible attractions. The idea of smoking opium does not recur to us perhaps three times in a year.

There is no danger of being drawn beyond the limits of prudence and necessity in smoking opium. Without meaning to dispute that excess is always injurious, we assert that the effect of smoking opium upon the great smokers of Indo-China has been greatly exaggerated.

By keeping within prudent limits, that is to say, smoking from one to ten grains of opium during twenty-four hours, there is obtained a very salutary sedative, and beneficial medical effect in the following cases:

In the first rank we cite cases of chronic bronchitis and laryngitis, not excepting the acute forms of these affections; pertussis in patients capable of smoking the opium pipe; cases of asthma, of anguina pectoris, and of nervous palpitations, of gastralia and of enteralgia.

In the second place, neuralgia, facial, dental, sub-orbital and hemicranial; muscular and articular rheumatism; for it should be observed especially that beside the sedative action of the smoke of opium, there is likewise, from large doses the general calorification and sudation or diaphoresis, which the practitioner may excite and employ according to the clinical indications. We will conclude by replying, in advance, to an objection or rather an observation which we anticipate:

It will be asked, why not substitute for the opium pipe, opiated cigarettes? At one time we were thus deluded. We sought and discovered a substance burning readily and readily impregnated with the watery solution of the extract

of opium, and capable of being made into opiated cigarettes composed as follows:

Take; pulverized flower of the linden in sufficient quantity to make twenty cigarettes—

Impregnate these flowers with an aqueous solution of one gramme of extract of opium; let them dry in the air, moderately, and make of them twenty cigarettes, containing one grain (five centigrammes) of extract of opium. When dried sufficiently let them be smoked in the usual manner.

The result has not answered our expectations; although mild the smoke of the opiated linden flowers, especially when mingled with that of the paper, which is always acrid and irritating, does not permit pulmonary aspirations to be made.

It becomes necessary to restrict the aspirations to the mouth, and it is with difficulty that the taste of the opium can be perceived in the smoke, which, in fact, is largely, if not totally evaporated before reaching the mouth.

What has been said of opium cigarettes may be said of all medicated cigarettes, and it is our conviction that every medicinal substance used by inhaling its smoke, should be burned in the state of extract, as the extract of opium, in an opium pipe, whose name we will some day change for that of *pipe for smoking medicinal extracts.*

Reflex Actions Determined by Constant and Continuous Electric Currents.

BY DR. ONIMUS.

The author considers the reflex contractions which are produced in muscles remote from those which receive the divisions of the electrified nerve.

In the cases in which the motor and the sensitive nerves are intact, it is observed that the descending or centrifugal current produces reflex contractions at the close, and the

ascending or centripetal produces reflex contractions at the opening.

In the cases in which the sensitive nerves are paralyzed (by section of the posterior roots) it is observed that the ascending current produces nothing. In the cases in which the motor nerves are paralyzed (by the administration of curare, after ligature of the artery of the limb which is to be protected from the action of the poison) the same results are obtained as when the nerves are intact.

One question remains which the author proposes to solve, viz.: Is the action of the current as a cause of reflex action continuous, or does it act upon the separated parts only at the moment when the contractions appear?

ORIGINAL COMMUNICATIONS.

Case.—Amputation at the Shoulder-joint.—Recovery.

BY HIRAM WANZER, M. D., CHICAGO, ILLS.

I was called, Dec. 8th ult. to Mr. C. Jerman, aged 51. He was rather spare, small in stature, with constitution not vigorous. He had suffered from the age of 16, with discharging ulcers upon one leg and foot, which had healed two years since. He was one of the employés of Messrs. Moody & Church. While engaged at a surfacing planer, which has a cylinder with three cutting knives, performing some 3,500 revolutions per minute, the fingers of the right hand were caught in the machinery, and its deadly work was not finished until the hand, forearm, and arm, were drawn in and severed by piecemeal, as far as the upper fourth of the humerus. Further advance and destruction were prevented by the contact of the chest and shoulder against the planer.

The patient was taken to a druggist, who administered morphia and diffusible stimulants. There was now sufficient pulse and vitality to justify operative procedure, but the surroundings being unfitted, he was taken to his residence, one and a half miles. The length of time, and the degree of suffering, during his transit home, were succeeded by shock, and such extreme prostration of the vital powers, that operative measures were thought contra-indicated.

Drs. H. T. and E. W. Lee, were called in consultation. I improved the moments, before their arrival, in the administration of strong coffee, and diffusible stimulants, which had but little effect, either in increasing the heart's action, or in arousing the vital energies. I thought it judicious to follow the opinions of some of our most eminent surgical authorities, in waiting for warmth of the surface, color, pulse at the wrist, consciousness, and a greater degree of reaction, especially before proceeding with such a formidable operation. It was the opinion of the counsel, that no further reaction could be obtained—that operative measures were only indicated. Drs. Lee administered chloroform to anesthesia. During its early inhalation the almost imperceptible, fluttering pulse, became increased in tone and volume. There had been very little hæmorrhage in consequence of the torsion of the vessels. The brachial artery was pulsating at the bottom of the wound; the torn terminal branches of the brachial plexus were lying by its side. The question arose, whether to disarticulate the head and remaing shaft of the humerus by incision, or separate the soft parts from their circumference. I chose the latter to avoid opening the cavity of the joint, and prevent so large a suppurating surface. After ligating the brachial artery, the soft parts were carefully detached from the bone by the fingers and scalpel. There were difficulties encountered in reaching and perforating the capsular ligament in consequence of its distance and density. At this juncture we were suddenly stopped. The pulse forsook the wrist, respiration momentarily suspended; showing the well marked

toxic action of the chloroform upon the blood, nerve centers and respiratory organs; free admission of atmospheric air, cold jets of water were thrown upon the surface, with recumbency. The patient soon gasped; the pulse was again perceptible at the wrist; respiration re-established, the operation was resumed and finished. Considering the lesion to the blood vessels, caused by the accident and operation, the hæmorrhage was insignificant, the brachial artery only required ligation. The flaps handsomely formed by the machinery, were coapted by several interrupted sutures, &c. Heat and derivatives were now applied to the cold surface and extremities. He speedily reacted from the shock of the injury and operation, when a cordial stimulant was given.

9th. 8 A. M. Visited patient with Dr. E. W. Lee, found the pulse 120 per minute, with surprising strength and volume; there was general warmth and moisture upon the surface. He had enjoyed some refreshing sleep. The following day there was an erysipelatous glow, with heat and tenderness in the axilla, which soon disappeared, by cold lotions and 20 gtt. every 3 hours, of Tinct. Ferri Muriatis, alternated with Rhine wine, his accustomed beverage, which were all the internal medicines given throughout the treatment. His appetite daily increased; the secretions normal. A small portion of the wound united by the first intention, with very little suppuration. I ascribe his speedy recovery much to his former uniform habits, the plasticity of the blood, and to our entire withholding of all narcotic remedies.

Remarks.—As stated, morphia was given by the apothecary. That would once have been my procedure, until surgical experiences taught me that narcotics, under the circumstances, not only allay *pain*, but they obtund nerve sensibility; they often paralyze the brain and heart; frequently they conduct our patient into a quiet sleep, which knows no waking. So seductive, *then*, is their action, it matters not how minute the dose, it is difficult to determine whether our patient is suffering from the pre-existing shock,

or from the action of the medicine, so contra-indicated, as I believe them to be, for *pain*, after traumatic injuries. I have abandoned them for medicines that exalt the vital actions. *Pain* then becomes a therapeutic agent, a priceless stimulant to our patient, an excitor to organic action in the struggling reaction. Pain is a conflict for the mastery, that he often feels long after the pulse has left the wrist, and frequently abiding until the spirit takes its flight. I find, in searching the records of some of our surgical authorities, there are conflicting opinions about operating before reaction is established. I am confident my surgical career would have been brighter and more successful, had I used less opium and its alkaloids, and had I frequently acted with a greater degree of promptness, as in the case reported. In waiting too long for reaction, it often never came. In being too conservative, trying to save a worthless member, the patient has often sunk from pyemia, and the exhausting suppuration; or he has often passed, before this process was established, into traumatic delirium, tetanoid symptoms and death.

172 West Twelfth Street.

Cook County Hospital, Chicago, Ill.

Rupture of Urethra—Cystotomy—Cured—Service of Dr. Edwin Powell—B. C. Miller, House Surgeon.—Frank G., aged 60, native of Ireland, by occupation a grocer, admitted into the hospital October 9th, 1868. Habits irregular; previous health good. States that four weeks since he contracted gonorrhœa, five days after this was unable to micturate; he applied to a physician for relief and was catheterized with great difficulty. After this was unable to pass a drop of water, an instrument could not be passed. After suffering the most intense agony for some time he was suddenly relieved, and on examination his scrotum was terribly swollen. Four days after this, two

large incisions were made into each side of the scrotum, liberating a large amount of water, pus and gangrenous shreds of tissue. When admitted to the hospital he was very much emaciated and depressed in body and mind. The scrotum presented a swollen, gangrenous appearance, and an odor so offensive that it was almost impossible for any one in the ward to lie in close proximity to him; on examination, found that the urine passed through the scrotum, none escaping through the urethra in front. In the perineum, extending as far back as the junction of the deep and superficial layer of the deep perineal fascia was a large fluctuating mass.

Oct. 12.—Patient restless during the night, cannot sleep, appetite poor, large sloughs came away, leaving the right testicle exposed. At least one-half of his scrotum gone.

Oct. 13.—Was placed under the influence of chloroform, and cystotomy preformed. (The operation was essentially the same as Dupuytren's lateral operation for stone.) On making the first incision through skin and superficial fascia a quantity of pus, urine and gangrenous cellular tissue was met by the operator. Not much hæmorrhage accompanied the operation. Patient reacted kindly although quite weak. He was given a full dose of morphine, and an ounce of brandy. Three hours after operation was quite comfortable.

Oct. 14.—Patient feeling quite comfortable; urine all passing through the incision. Removed another large slough from the scrotum, leaving both testicles exposed.

Oct. 16.—The sloughs all came away to-day, leaving a surface studded with healthy granulations, and the patient minus, at least calculation, two-thirds of his scrotum. Water all comes away through the incision. The patient able to hold the water for a time and pass it at will.

Oct. 19.—Is comfortable. Has complete control over the evacuation of bladder. Scrotum granulating finely.

Oct. 30.—Doing well. Good appetite and sleeps well.

Nov. 1.—Still improving. A No. five catheter passed

into the bladder and allowed to remain, the water passing through it.

Nov. 5.—Removed the No. five catheter and introduced a a No. *ten*, and allowed it to remain. The wound caused by the operation granulating, is almost healed.

Nov. 9.—Wound completely healed. Scrotum doing well.

Nov. 26– Is gaining flesh rapidly. Scrotum healed to a small point, that communicating with the urethra.

Dec. 7.—Scrotum completely healed; catheter removed. All the water passing "*per vias naturales.*" The patient has been for years,the victim of a varicocele which caused him great inconvenience; on the scrotum healing and the patient regaining his feet, the varicocele was found to have disappeared. Whether the veins sloughed away with the scrotum, or whether the contraction caused by cicatrization of the organ cured them, I am unable to say.

Dec. 26.—Since admission to the hospital the patient has gained twenty-one and a quarter pounds. To-day he is discharged, cured.

Super-Oxygenation as a Therapeutic Measure, with Notes of Cases Treated.

BY S. S. WALLIHAN, M. D., CHICAGO.

[Concluded.]

All the metallic per-oxides give off oxygen, when heated to redness; and no doubt, eventually, the disengagement of the gas will involve only the expenditure of a certain amount of heat.

In emergencies, and when a prolonged use of the remedy is not required, any of the foregoing, or equally unobjectionable methods may be used. When exhibited in chronic cases, involving protracted use of the remedy, and in some cases of unusually sensitive lungs, or of repugnance to the slightest disagreeable taste or smell, only those processes

which afford the gas in a state of the utmost purity are admissible.

The apparatus for the use of condensed gas in iron bottles, invented by Barth, of London, although very convenient for such practitioners as find it out of the question to manufacture their own gas, and possessing some decided advantages for all, has never come in much request.

Galante, of Paris, has perfected a very convenient apparatus for the manufacture of pure oxygen, but its expensiveness, including delay and cost of importation will preclude its use in this country. Dr. Beigel has patented a form of apparatus and inhaler, which is both competent and convenient. Sprague, of Boston, has brought an apparatus which possesses some merit, in having attached a polished, patented, automatic heat-regulator; but I do not consider its advantages sufficient to warant the somewhat extravagant price asked for it.

I am satisfied, however, that *the short-comings of impure and carelessly manufactured gas have done more than all else to bring the treatment into discredit, and prevent its use by the profession at large.*

1. *Protoxide of nitrogen*, the real value of which, as a therapeutic, has been overshadowed by its brilliant properties as an anæsthetic. More than twenty years ago, Dr. Zeigler, of Philadelphia, experimenting with it, for dental purposes, also administered it, tentatively, in moderate doses, for chronic general torpor of the system, nervous and other functional disorders, with very encouraging results. In his work on this gas, now some years out of print, he dwells on its physiological action, when exhibited to proper subjects in suitably regulated doses, is very positive in his conclusions as to its therapeutic value, and urges the medical profession to recognize and further develop its claims as a remedial agent. His deductions were, of course, entirely empirical, at least he made no attempt to elucidate the *rationale* of its action.

Dr. Barker, a more recent authority on the same subject, quotes Dr. Zeigler, as above, and coincides with him.

Dr. MacCormack thought that, properly diluted, it would be found valuable in the treatment of some forms of disease; but he seems not to have used it to any extent, and predicated his opinion wholly on the proportion of oxygen contained in the compound.

Garrod, and other recent authors on Materia Medica, do not mention it.

Dr. Hartshore, of Philadelphia, in his *Essentials of Pracal Medicine*, (Phila., 1868,) advises a trial of it in bad cases of asthma, evidently with a view solely to its anæsthetic effects. Dr. Birch doubts if it be in any sense a super-oxygenating agent. Other authorities on the medical uses of oxygen, make no mention of this compound.

"Oxygenized Air," of late so over-lauded in advertisements, is nothing more or less than a certain admixture of protoxide of nitrogen with free oxygen and common air. In fact, in most instances, as administered by several pseudo-prophets each of whom claims to be a "discoverer," and has been selling "rights" to use the treatment, it is composed of protoxide only, given in moderate doses.

Used alone, aside from its anæsthetic properties when exhibited in larger doses, I do not attach so much importance to this agent as some others have done; but as a modifier of pure oxygen I consider it invaluable. In some spasmodic affections I have found its use a valuable substitute for chloroform and the ethers. It often succeeds when these utterly fail, and it is never followed by the disagreeable and some times serious symptoms attending their exhibition. It is excellent in neutralizing affections, and in certain forms of "nervous headaches" it has proved almost a specific. I have invariably succeeded in overcoming the wakefulness of nervously debilitated women by the administration of moderate doses at bedtime.

Its greatest value, however, as it appears to me, lies in in its use as a diluent and vehicle for pure oxygen. Without

venturing upon any discussion of its chemical or physiological action on the human organism, reference to a few known facts concerning it will be in place:

First, it is the most soluble of all gases, water at ordinary temperatures, absorbing its own volume of the gas.

Second, it supports combustion almost as perfectly as oxygen itself.

Third, the exhilarating properties popularly ascribed to it have been very much over-stated, a majority of those inhaling the pure gas experiencing nothing of the kind.

Fourth, its effects on the nervous system are peculiar, and may be made so slight as to be inappreciable, or so powerful as to produce momentary insensibility, with any desired degree of approximation to either extreme.

Fifth, inasmuch as it is largely absorbed by the system, when taken into the lungs, and produces many of the same effects as follow the use of oxygen itself, which it also very much resembles in its action on metalic and other oxidizable substances, it may be safely assumed that it is, of itself, a powerful super-oxygenating agent.

But, setting aside its claims as a therapeutic *per se*, I have become fully satisfied that, used as a modifier of oxygen gas, it plays no unimportant part *as an adjuvant*, while at the same time *increasing the solubility of the basic element.*

In this connection I desire to call attention to a point which seems to have escaped the attention of every author who has written on the use of oxygen.

It is well known that alcohol is the basis of all, so called, "spirituous" beverages; but no physician, desiring to exhibit a stimulant, prescribes raw alcohol, or alcohol and water. Choice brands of old wines, brandies, whiskys, etc., although utterly worthless without it, are not valued according to the percentage of spirits they contain; and *the action of oxygen, properly "toned down" and modified is as different from its action in an unmixed and undiluted state as is the action of absolute alcohol from that of the best French brandy, or good grape wine.* From my repeated tests of the gas, in

every form of administration, and in a great variety of cases, I am forced to to the conclusion that, except in certain comparatively rare contingencies, and then, as necessarily, only for temporary purposes, *unmodified oxygen gas is unfit for general therapeutic use as is unmodified and undiluted alcohol for use as a beverage.* Nor do I consider its dilution with common air, as practiced by Goolden, Birch and others, better, in comparison, than alcohol for medicinal use, diluted with simple water.

Not to discuss this point further, I am persuaded that another source of some reputed "failures" of the oxygen treatment, has been from the neglect of experimenter to properly modify the powerful agent (for good or evil) they have tampered with.

3. *Oxgenated water*, probably the best vehicle for the introduction of oxygen into the system by means of the stomach, is prepared by converting water into steam, thus expelling all its atmospheric air, after which pure oxygen gas is brought in contact with the steam, under high pressure, and takes the place of the expelled air. The water thus becomes a saturated solution of the gas, and is the only oxygenated water worthy of name. At present it can be procured only in England, where it is prepared with considerable care by the Messrs. Robbins & Co., and by Barth, of London. Dr. Barth was first to call attention to it, and has patented an apparatus for its manufacture. It is to be hoped some enterprising manufacturing chemist, in this country, will undertake its careful and thorough preparation. Whenever direct absorption into the gastric and portal circulation is the object in view, this is a most eligible form for the exhibition of the remedy. To what extent it may possess antidotal and antiseptic properties, in some forms of zymotic diseases, *e. g.*, diphtheritis, cholera, scarlatina, etc., remains to be demonstrated. I anticipate important results in this direction. The advantages of ready preparation and portability render it especially valuable in the absence of, or in conjunction with other methods of administration.

4. *Nitrous-oxide water*, properly prepared, will, in time, become more popular than now.

While considering it far inferior to *oxygenated water*, Dr. Birch admits that "in some nervously depressed and hypochondrical patients" he would give it the preference. It was originally put forth as a patented nostrum, and had quite a sale; but it may be questioned whether some of its properties are not measurably due to the trace of nitrous acid generally present.

5. Oxygenated bread is being manufactured and used, to some extent, in England, and is highly extolled by several practitioners of some repute. Dr. Birch, in particular, is quite sanguine respecting its claims, predicting that it will prove a boon in medical practice. It is prepared on the same principle as oxygenated water, *i. e.*, by substituting pure oxygen gas for common air and carbonic acid, in aërating the dough. Processes have been perfected in its manufacture by which it is made to retain its own sweetness and preserve the perfect occlusion of the oxygen for several weeks.

"A surprisingly small bit of this bread proves its special value *in suitable cases*. * * * Its relative effect on the appetite is singular. Thus, on the one hand (as might be expected) it stimulates the appetite when absent or capricious, while, on the other hand, it tends to produce such a feeling of epigastric fullness, when sufficient food has been taken, as to effectually suspend (if not satisfy) some morbidly craving appetites. * * * *In some cases* it will be found advantageously to supersede artificial, pepsine, pancreatine, and even quinine and the mineral acids. * * * It is particularly indicated in cases of delicate children with continually recurring ascarides, functional derangements of stomach and bowels, and mesenteric weakness." (Birch op. cit., pp. 18, *et seq.*)

If the value of oxygen, when exhibited by the stomach, be fully established, then I have no doubt oxygenated bread, made with sufficient care and accuracy, is a desirable medium for its administration, and may be found a

desideratum in such cases as referred to by Dr. Birch, or where, for any reason, inhalation is objectionable or impossible.

6. Per-oxide of hydrogen, in solution, has been recommended for internal use, by Dr. Richardson and others. Dr. Goolden, of St. Thomas' Hospital, has used it, but finds it much less reliable and efficient than other preparations, as well as somewhat objectionable on account of it disagreeable flavor. It must be borne in mind that this compound is a very unstable one and liable to explosive decomposition.

Of other preparations, whose claims as oxygenating agents, have been urged, may be mentioned—*ozone water*, which is evidently but another name for an inferior article of oxygenated water, but for which special virtues have been claimed by a few practitioners. As brought to my knowledge, it is simply water through which oxygen gas, made by the ordinary chlorate of potash and manganese method, has been passed for purification. The water absorbs but about four or five per cent. by volume, of the gas, but contains also traces of chlorine, to which element the attractive, antiseptic and *anti-syphilitic* properties ascribed to it, may be largely due.

Ozonized oil has nothing but its disagreeableness to recommend it; hence it has acquired the name of "rancid oil."

The *permangauates*, *perchloric*, *nitric* and *hydrochloric acids* and the *chlorate of potash*, are all, undoubtedly, sources of free oxygen, when internally administered. Each of these is rich in oxygen and readily yields up one or more equivalents, under slight modification of conditions; hence the inquiry is entirely pertinent, as to how far *the tonic, antiseptic and other effects ascribed to these remedies, is due to the free oxygen evolved during their decomposition and solution in the system.*

In a majority of cases, I have used the remedy chiefly in gaseous form, administered almost exclusively by inhalation. In several, I have tentatively used oxygen gas; first,

pure and of full strength; second, diluted with common air; and third, admixed in various proportions with protoxide of nitrogen and common air.

In severe paroxysms of spasmodic asthma, which have continued until the system seriously suffers from non-aëration of the blood and general venous congestion, in cases of asphyxia, fatal syncope, and other cases of suspended animation, and in some other emergencies—*e. g.*, threatened uræmic poisoning—the first form of administration may be selected as the best. For general use, and in ordinary cases, the last form mentioned is decidedly preferable. The second form may be substituted when the gas, in its full strength, is not required or admissible, and the protoxide is not available.

In the matter of proportions, and as respects the quantity to be used in various cases, there is as great range for selection and the exercise of professional judgment and discretion as in prescribing and compounding complex pharmaceutical preparations. Those physicians who think they "know all about the oxygen treatment,"—and they are not a few—having at some time administered, or, as is too often the case, having only *read* of the administration by inexperienced parties, of a few gallons, more or less, of what might be termed "varo gas," have blundered as stupidly and failed as utterly, as he would who should prescribe a few desultory doses of crude drugs, and then *pro*scribe the remedies if they failed to produce satisfactory constitutional effects. I may add, that I have often heard the use of oxygen abruptly condemned by physicians, but in no instance by one who has had the slightest practical knowledge of its effects.

The reply of an eminent English surgeon is suggestive. When asked his opinion of the treatment, he candidly admitted that, "having never administered it himself nor witnessed its administration in the hands of others, he could express no intelligent opinion concerning it."

That it requires some expenditure of care and time in its manipulation, and the exercise of much discretion in its

exhibition, and that some practitioners will fail in its use, through lack of these essentials, is very true; but that it adds so largely to our therapeutic resources—is, in fact, a desideratum in so many cases and contingencies, that no conscientious physician, who has once realized its thoroughly scientific claims, and witnessed its intelligent administration, will neglect to avail himself of its aid in all suitable cases.

I append brief clinical notes of a few selected cases in which I have met with marked success through the use of some form of super-oxygenation:

Case 1.—Mrs. J. S———, aged thirty-nine, by profession a singer and teacher of vocal music, gives the following history:

Several of her family have died of phthisis, and for several years past she has shown symptoms of its gradual invasion. Each winter she is troubled with severe bronchitis. It is now worse than ever before, and she has been obliged to forego the use of her voice. She is alarmed lest her present condition is premonitory of rapid and fatal decline. "It is just as the others started." I find her pale, anæmic, with rapid, weak pulse, cold extremities, severe cough and sub-clavicular pain, accompanied by a profuse muco-purulent expectoration. She is a confirmed dyspeptic, and as is usual in such cases, suffers greatly from functional derangement of the heart. Her appetite is poor and capricious, bowels constipated, and she is excessively fatigued on slight exertion. She is despondent, hysterical, and only consents to a trial of oxygen treatment at the earnest solicitation of her friends.

March 25, 1868, she presents herself for treatment. At a forced inspiration she can inhale 150 cubic inches of the gas, which I adapt to her peculiarly prostrate nervous condition by larger additions of protoxide of nitrogen.

April 1st.—The nervous depression of this patient is almost entirely relieved. She coughs no less—rather more, and expectorates more freely. She continues to take treatment once daily, and can now inhale 180 cubic inches at an inspiration.

April 10th.—Improvement in every respect is very marked. Her appetite and spirits have returned—she coughs less, and her expectoration has diminished, and lost its purulent character; extremities comfortable, *constipation relieved*, and she is enabled to resume her place in the choir, having no trouble to do even double duty with her voice.

April 20th.—The improvement continues. Her general health is better than for a long time. The bronchial trouble has disappeared, she has no cough, spirits never were better—has no thoughts of dying of "consumption;" sings, works and *eats* without fatigue or distress. Has gained in flesh, her cheeks bloom with healthy color, and she has increased her lung capacity to 220 cubic inches.

April 25th.—Patient considers herself *well*; appetite and digestion excellent, pulse full and strong. no more palpitation—she is as happy and hopefu as she previously was wretched and despondent.

Treatment suspended. (I have met this patient frequently since, and there has been no return of the untoward symptoms. Jan. 1869.)

Case 2.—May 23d. Mrs. C. L. W———, aged twenty-nine, married, applied for treatment. Has always had "weak lungs," and her friends fear the development of pulmonary disease. Her father died of cancer of the stomach, mother of cardiac disease (?) Has had a severe cough and circumscribed "sore spot," with a sense of constriction in her left lung, for a long time. Has been under the care of several eminent physicians, without benefit.

She is "nervous" and anæmic. The menstrual function has not been properly performed in three years; is often entirely wanting—at times the discharge is profuse, acrid and colorless; at others it is scanty, very offensive, and of a greenish or yellow color. She also suffers from frequent attacks of severe congestion of the kidneys, and has, almost constantly, a sense of weight and soreness in the region of these organs.

Placed her upon moderate doses of oxygen, well diluted with protoxide and common air.

The first dose affords a degree of immediate relief. She feels "rested," and the sense of "tightness" in her chest is lessened. Lung capacity 140 cubic inches.

June 1st.—Improvement has been constant and gratifying. Appetite and digestion have become perceptibly better. She coughs less, and the sense of soreness is scarcely perceptible; is buoyant and hopeful, and has a tinge of color in her cheeks. Inhales 165 cubic inches, and I order her to inhale moderate doses, twice daily, for a time.

June 15th.—The usual complication has apparently assumed a critical form—what were chronic becoming sub-acute conditions. She suffers considerably and is greatly alarmed. Active oxygen treatment suspended for the present, and measures of a soothing nature are addressed to the local malady—hot fomentations over the regions of the kidneys, and a hot hip-bath twice daily, with some other derivative measures, are prescribed, and moderate inhalations of dilute protoxide alone are administered.

June 20th.—The acute manifestations noted on the 15th soon subsided, and now the patient feels better than for years. Treatment resumed, with an increase in the proportion of free oxygen, and the quantity taken twice daily, somewhat diminished. She can now inhale 200 cubic inches at an inspiration.

June 25th.—Improvement since last record quite marked, and patient very sanguine of ultimate restoration to a fair degree of health.

July 1st.—Menstruation natural for the first time—painless, the discharge normal in quantity and of healthy color. Patient no longer "nervous"—has considerable color in her face, and walks from two to three miles daily without fatigue. Her voice, which had failed her in singing, is again strong,

the soreness and constriction entirely gone—coughs but little, eats heartily, digests well, sleeps better than she can remember to have done since childhood, and has gained considerably in flesh. She has developed her lung-capacity to 225 cubic inches, and her chest measurement accordingly. Her friends are greatly surprised at her improved appearance.

July 10th.—Patient continues to improve. Treatment moderated, and conjoined with a mild chalybeate course.

July 25th.—Treatment suspended, and patient returns to her friends, feeling that she has a stronger hold on life than she had dared to hope was attainable. With proper care and under favorable conditions, she is in a fair way to live many years, and enjoy a fair degree of health.

Case 3.—Miss A. B.———, aged nineteen, has been subject to severe paroxysms of asthma, quite frequent, for some years. A taint of the disease seems to be hereditary. The slightest changes of temperature and exposure bring on a paroxysm, which lasts from one to six days, and is often so violent as to alarm her friends. Even the inhalation of chloroform fails to control the spasm, when it is severe.

She has changed climate several times, by the advice of physicians, and has recently consulted and received a course of treatment at the hands of a noted throat-and-lung "specialist."

Nothing she has ever done having given her any permanent relief, she was brought by her father, Judge B———, to the office for advice, May 25th.

I found her delicately organized, highly sensitive, quite anæmic, as might be expected, and suffering from evident general venous congestion. There is a dark shade about her eyes, and she is excessively fatigued on slight exertion. I very confidently recommended a trial of the oxygen treatment, and she was placed upon daily inhalations of protoxide, containing but a trace of free oxygen. Lung capacity but 75 cubic inches.

June 4th.—She reports that the gas has "cured" her; she has had no oppression of her breathing since she began it. She has improved considerably in general appearance. Her complexion is as clear as could be wished. She inflates her lungs well and with perfect ease—inspiring 100 cubic inches at an effort.

June 20th.—No return of the paroxysms yet. Her general health has undergone great changes. Formerly she had very little appetite, and that of a morbid and capricious kind. Now she has excellent relish for substantial food, *and wants plenty of it.*

July 1st.—Improvement of the general health continues. Exposure from being caught in a storm, a few days after last record, induced a mild paroxysm of asthma, but it was readily controlled.

July 10th.—Patient feels buoyant and full of courage. Can now endure considerable exercise without excessive fatigue, and her mother reports that "she is really getting to be worth something." Treatment continued every other day. She now takes 140 cubic inches at an inspiration.

July 25th.—Treatment has been somewhat interrupted since last writing; but the general health of the patient continues excellent, and she breathes

as freely as as any non-asthmatic. She also exposes herself to changes of temperature with impunity. Does not "take cold" so easily as heretofore.

Aug. 10th.—There has been no return of the paroxysms, although the patient says she has repeatedly exposed herself to the same influences which invariably excited them, previous to treatment.

She is advised to continue the treatment at intervals, but as the patient removed from the city, no further observations are practicable.

(Nov. 30th.—This patient reports that she has continued to enjoy excellent health and has had but one paroxysm since treatment was suspended. She thinks if she could have continued the treatment for a longer period the cure would have have been perfect.)

Case 4.—Aug. 10th.—Miss E. L. C———, aged sixteen, was brought to to me for advice. Has been subject to epileptic convulsions for some years. The family history shows the malady to be hereditary. She is extremely "chlorotic"—tall and slender, with stooping, irregular gait and attitude, feeble pulse, soft, imperfectly developed muscles, sallow complexion, deeply shaded about the eyes, contracted chest, feeble and weak digestion. Has never menstruated. Cephalalgia is a constant symptom; sleep disturbed with horrid dreams, in which she starts, screams, gnashes her teeth, talks incoherently, and is frequently found in the morning hanging across the foot-board of the bed, "frothing at the mouth"—evidently having had a paroxysm during the night. I unhesitatingly advised a persevering trial of the oxygen treatment, and

Aug 13th., she was placed upon moderate doses of modified oxygen. Her lungs are extremely small, and imperfectly expanded and she can inhale but 60 cubic inches at one inspiration.

Aug. 20th.—She has perceptibly improved. Her sleep is much more quiet and natural, and there has been no return of the "fits." She can now take 90 cubic inches at an inspiration. Order her to take a liberal and nutritious diet, and place her upon mild chalybeates.

Aug. 30th.—Still no return of the paroxysms, appetite and digestion very much improved, and from being languid and listless, and constantly "tired," she has come to be quite ambitious, and endures considerable muscular exertion without fatigue. Her "headaches" have ceased to annoy her, she sleeps quietly, her complexion has become clear, there is a show of color in her cheeks, and she has gained in flesh. Can inspire 100 cubic inches.

Sept. 14th.—In every respect this patient continues to improve. She attends school again, walking several miles daily, without fatigue.

Treatment continued every other day. Lung capacity 105 cubic inches.

Oct. 1st.—Is becoming quite robust in comparison with her former condition.

Oct. 10th.—From having exposed herself nearly all last night—the evening being quite chilly and damp—in attending a political demonstration, she is, to-day, qnite indisposed, and for an hour or two, manifested symptoms of her former malady. The paroxysm, however, proved slight and readily yielded to ordinary remedies. She is again put upon daily oxygen treatment. Her lung capacity has increased to 115 cubic inches.

Oct. 20th.—No recurrence of untoward symptoms. Seems perfectly well in all respects. Treatment continued every other day.

Nov. 1st.—The patient has continued to gain in flesh and strength. Her appetite is fairly insatiable, and among her mates she is one of the most active. Would be taken at a glance for a more than ordinarily robust person of her age.

Treatment administered but twice a week. She inspires 120 cubic inches.

Nov. 10th.—Her menstrual function has manifested itself naturally, and without unusual disturbance. Her parents are rejoiced, since they have always coupled her convulsions with the absence of the catamenia.

Nov. 25th.—Treatment entirely suspended. Patient in perfect health.

(Jan., 1869, this patient continues in perfect health, enjoying life actively and fully.)

Case 5.—Sept. 18th.—Mr. A. S———, merchant, aged fifty-one, applied to me. Has been an invalid for twenty years. Has confirmed dyspepsia, and excessive debility and irritability of the nervous system. Suffers much from constantly recurring paroxysms of a dull, benumbing pain, referred chiefly to the upper portion of the spinal column and base of the brain; and also has almost constant frontal headache. Constipation is habitual—with occasional attacks of diarrhœa; appetite poor and irregular, circulation feeble and unbalanced, extremities cold; almost impossible to keep his feet warm in winter. He is at times extremely irritable, as to mood, and at others is overcome by the most utter depression and despondency. He has suffered considerably from "ague," heretofore, and imagines he feels "dumb ague" now, at intervals. Has long been troubled with a derangement of the kidneys, his urine varying greatly from time to time, but always containing mucous and the phosphates in excess—as he has been informed by physicians who have examined it—his liver and spleen are both enlarged, and his cutaneous exudations have, at times, a very decided ammoniacal odor.

His urine—sample from that first voided in the morning, or urine sanguinis—has a specific gravity of 1030, contains excess of the alkaline phosphates, but there is a marked deficiency of urea and uric acid.

A course of thorough oxygen treatment is advised, with the prediction that several months will be required to effect marked and permanent benefit.

Sept. 20th.—Treatment begun, and the quantity of gas administered increased to double that usually prescribed, since all his vital functions seem oppressed and sluggish, and there is evident retention of urea in the system. Lung capacity 160 cubic inches.

Sept. 29th.—My confidence that oxygen would eliminate any excess of urea from his system, and my suspicions that most of his nervous symptoms arose from such retention, were well grounded. His urine to-day *is loaded with urea.* The nitric-acid test yields a mass of crystals of uric acid *equal to the bulk of both constituent liquids.* Other solids are present in but slight excess. Specific gravity 1035. (This example, like the former one, was from urine voided on first rising in the morning—the patient having taken the unusual quantity of eight gallons of the gas containing three gallons of pure oxygen, at nine o'clock the previous evening.) I could discover no traces of a saccharine or albuminous character.

All his nervous symptoms, which I had attributed to slight uræmic poisoning, have been materially relieved. He is less irritable, sleeps better and feels encouraged; but there is considerable disturbance of his general system. He complains of feeling some twinges of an ancient "rheumatism" revived. Treatment moderated by reducing the quantity of gas inhaled to one-half the former dose. He can take 200 cubic inches at an effort.

Oct. 11th.—The uncomfortable sensations and evidences of constitutional disturbance following the rapid treatment of the first week have disappeared. His appetite and digestion are improving. Sp. gr. of urine 1028, with still some excess of urea.

Oct. 18th.—Improvement has been gradual but constant, since last record. Cephalalgia is becoming a much less frequent symptom, and when present is less severe. Sp. gr. of urine 1025.

Nov. 11th.—Has steadily improved since last date, in spite of the drawback of constant overwork and perplexity in business matters. Sp. gr. of urine to day, 1022—no excess of urea. He inhales 220 cubic inches of gas at an inspiration.

Nov. 20th.—Urine contains no abnormal ingredients—no excess of urea, Sp. gr. 1018. Patient considers himself much more nearly "cured" than he had supposed was possible. His digestion is very good, he sleeps well,

and has lost nearly all his former irritability and inclination to despondency. His circulation is much more uniform—extremities in a comfortable glow most of the time, very little headache, and he does not become easily fatigued. Treatment suspended.

Jan. 5th.—Mr. S——— called and reports that he continues in every way improved.

PROCEEDINGS OF SOCIETIES.

Rush Medical College—Alumni Meeting.

The first annual meeting of the "Alumni Association of Rush Medical College" was held in the lower lecture room of the College on Feb. 3, 1869, "Commencement day," the President, Prof. E. Powell, in the chair.

Members present, Professor J. V. Z. Blaney, Jos. W. Freer, E. Ingals, M. Gunn and J. P. Ross. Drs. G. C. Paoli, G. J. Avery, N. T. Quales, C. T. Fenn, J. T. Weeks, T. D. Fitch, F. Henrotin, Jr., B. Durham, Theo. W. Stull, Geo. Egbert, D. V. Bachelle, F. A. Emmons, Ben. C. Miller, C. T. Parkes, D. L. Davidson, J. McClure, J. A. M. Gibbs, F. W. Coffin, H. Brownlee, E. S. Lathrop and the graduating class of 1868 and 1869.

The Constitution of the Association was read. The minutes of the meeting for the organization of the Association, Oct. 1, 1867, were read and approved.

On motion of Dr. C. T. Fenn, the Association proceeded to the election of officers for the ensuing year, with the following result:

For President, Dr. Alfred E. Ames, of Minneapolis, Minn.; for Vice President, Dr. G. C. Paoli, of Chicago; for second Vice President, Dr. B. F. Swafford, of Indiana; for Secretary, Dr. W. C. Hunt, of Chicago; for Treasurer, Dr. F. A. Emmons, of Chicago, and for Executive Committee, Drs. S. J. Avery, W. T. Quales and C. T. Parkes, of Chicago.

Dr. J. C. Paoli was then conducted to the chair, and in a

few pertinent remarks assumed its duties, when Prof. Blaney was introduced, and as President of the College on behalf of the Faculty, welcomed the Association to the halls of the College, congratulated them upon the auspicious event that, notwithstanding the inclemency of the weather, so many were assembled to do honor to their *Alma Mater*; alluded to the high character and standing of the graduates of Rush Medical College, not only during the late war of the rebellion, but throughout the Northwest and wheresoever dispersed, claiming for them a position in the profession the first among their equals, second to none in the world, and closed with an eloquent tribute to the memory of the late lamented President, Prof. Brainard, reminding the Association that to his genius and untiring efforts is mainly due the proud position the College and the her alumni now occupy, and that he felt assured that all who knew Brainard would keep for him a place in their memories as one who was entitled to and held a position among the first and most eminent surgeons of America, as the most original genius of his age in our country, and as the man who has contributed as much to the advance of surgery as any other member of the profession in America.

Prof. Powell, the retiring President, then delivered the first annual address, which was listened to with deep interest, and at its conclusion, Dr. Avery moved that the thanks of the Association be tendered to Prof. Powell for his very interesting and able address, which was heartily and unanimously carried.

On motion of Dr. C. T. Fenn, the Executive Committee was instructed to provide for an address or report for the next meeting other than the regular annual one of the President.

On motion, Prof. J. W. Freer and Dr. C. T. Fenn were added to the Committee to carry out the object of the last motion.

On motion of Prof. Ingals, the Secretary was instructed to request of the graduates of Rush Medical College wheresoever they may be (through the different medical journals)

to forward to him any history, or writing, or notice, either obituary or otherwise, of any of the alumni of this College, that may be of interest to the Association, to be read at any future meeting, or to be placed upon the records of the Association, also to request all graduates to forward to him their names and address, to be entered upon the register, or, if any should at any time be in the city, to call and enter their uames themselves.

The Association was then invited to a reception to be held in the evening, after Commencement exercises, at the house of Dr. W. C. Hunt. The meeting then adjourned.

W. C. Hunt, Secretary.

American Medical Association.

Richmond, Ind., Feb. 19, 1869.

Editor Chicago Medical Journal:

In Washington, in May last, after the American Medical Association had decided to hold its next session in New Orleans, I promised several gentlemen to ascertain whether an arrangement could be made with a first-class steamer to take all those who might wish to go via the Mississippi from Cairo to New Orleans, on special terms. My correspondence warrants me in saying that such an arrangement can be made, and that the particulars can be published on the 1st of April. Meanwhile, I thought it might be of interest to your readers to know that such an arrangement was on the tapis.

The time from Cairo to New Orleans will not exceed four days, and the fare will not exceed $35 from Cairo to New Orleans and return. This includes meals and state-rooms. Possibly better terms can be made, but as soon as the best are obtained I will advise you.

Prof. Gross and others thought that if all who desired to go to New Orleans via the river, could be accommodated on one well-appointed boat, it would make the voyage pleasant, and perhaps profitable. My idea is that some general remark upon the subject in the editorial pages of your March issue might interest your readers.

Very truly, etc.,

Jas. F. Hibberd.

FOREIGN ITEMS.

Dr. Paul Niemeyer, of Magdebourg, proposes a new stethescope to which he applies the name acouoxylon. Referring to the manner in which the stethescope was discovered by Laennec, and to the fact that the scratch of a pin made upon one extremity of a beam may be distinguished by the ear applied to the other end of the same, he asserts that the distinguished inventor fell into a radical error in making use of a hollow cylinder of paper, and subsequently of wood, constituting a medium compounded of paper (or wood) and air, and hence possessing different capacities for conducting sound. Although, he continues, Laennec himself was astonished and satisfied at hearing the pulsations of the heart in a much more clear and distinct manner, his successors, on the contrary, have determined that with the ear applied immediately, the same end was accomplished, and that the perception of sounds by the stethescope was even less clear. Moreover, it is certain that Laennec with his cylinder heard many phenomena which have not been confirmed subsequently, and which probably were secondary sounds produced in the interior of the stethescope, which, from the time of Laennec has been of considerable length.

If now we bear in mind the physical law exactly determined by Chladni and Savart, that wood is a much more efficient conductor of sound than air, that in the relation of this capacity pine wood is eighteen times superior to air; in musical instruments, pine wood in *masses* is used whenever the conducting of sound only is desired. We ask, therefore, why there should be used in medicine a hollow cylinder which weakens, and even disturbs the perception of the phenomena which it is desirable to recognize as clearly as possible. The Doctor advises the construction of a stethescope by turning a solid cylinder from a single piece of very dry pine wood, which he terms acouoxylon, and which he asserts to be the only stethescope constructed in accordance with physical laws, and consequently superior in every respect to the stethescope of Laennec. *Probatum est!*

EDITORIAL.

The Last Number

Of THE JOURNAL inadvertently went to press and was past praying for before it was noticed that the Editorial Department was not represented save by Book Notices. The highly valuable original matter offered to our readers in its pages cannot have escaped the special notice of our readers.

The notice of Dr. Phillip's book is marred by the omission of an "h" from "Ophthalmia." For "Trumbull," read "Turnbull." The proof was read by a non-professional. For sale by Walker & Son, McVicker's Theatre Building.

Medical Legislation in Illinois.

At the present writing it would appear that the very absurd act for the protection (!) of the medical profession in this State, has received its quietus at the hands of the Legislature.

The very desirable statute for the regulation and promotion of the study of Anatomical Science, has passed the House, and has been ordered to a third reading in the Senate, which we suppose is about equivalent to its passage. The profession and the public are to be congratulated at the result.

Some one or more Sorrows-of-Werter Sentimentalists in the Senate, who should have been born in the Middle Ages, opposed the bill in their most forcibly-feeble manner, but the good sense of the body triumphed. *Laus Senatu!*

Svapnia and Sweet Quinine.

These preparations (see advertising pages of THE JOURNAL) from our own trials, and the reports of our friends, we fully believe are entitled to the merits claimed for them by the manufacturer.

BOOKS RECEIVED.

ON THE DYNAMICS, PRINCIPLES AND PHILOSOPHY OF ORGANIC LIFE: An Effort to Obtain Definite Conceptions of How do Medicines Produce their Effects? (Valedictory Address, delivered to the Muskingum County Medical Society, at its annual meeting held in the city of Zanesville, Onio, May 6, 1868.) By Z. C. McElroy, M. D., Pres., of Zanesville, Ohio.

The essay with the foregoing title appears to be an attempt to establish some rational basis for the so-called science of therapeutics; an attempt whose success the entire medical world would welcome most joyfully.

It is certainly true, as the writer asserts, that we are more in need of a "more philosophical classification" of the mass of empirical facts now in existence, than of any additions thereto. This need he assnmes to have supplied in his theory, as set forth in the pamphlet before us, the essence of which appears to be a reduction of all organic processes into the two generic totals, "nutrition and oxydation," or constructive and destructive metamorphoses, and the operations of medicines to modifications of these two classes of phenomeua, by which they become promoters or retarders of nutrition or constructive metamorphosis, or of oxydation or destructive metamorphosis, respectively, a most attractive theory should it be sustained by a wider generalization, and more accurate analysis.

We think the prefatory quotation with which our author introduces his subject somewhat unfortunate, viz: "Since it is given us to know our own existence, and be conscious of our own individuality, we may rest assured that we have what in reality is a far less wonderful power, the capacity of comprehending all the conditions of our life." This *non sequitur* may not, possibly, transcend the scope of Professor Draper's "profound faith" in the intellect of man, but we think it entirely surpasses the present reach of that intellect.

Much credit should certainly be awarded to the author for the industry and ingenuity which he has displayed in the collection and arrangement of his data. We must, however, be permitted to express the opinion that he has fallen into that most common of all errors, to which the student of natural sciences, especially, is exposed, hasty generalization. We are inclined to think, too, that he has, sometimes, been led by the aptness of his analogies to forget that analogies, however striking, are yet not identities, and hence while they are frequently admirable as identities, they are as frequently worthless as proofs. Let us take, for instance, his favorite example, the electro-magnetic telegraph, in which he detects such striking resemblance in structure and function, normally, to the nervous system, that he arrives at the conclusion that the laws which govern, and the principles which underlie both are identical. This is certainly a step, and a long step in advance of the times, but it seems not unreasonable to follow the course pursued in determining organic analogies in comparative science, and apply pathological as well as physiological tests, and here we think the analogy ceases. The nervous system, when deranged functionally or structurally, manifests many and varied phenomena to which the electro-magnetic telegraph furnishes no analogies whatever, but in order to determine identities no variations are admissable under any aspect.

In the brief space which can be spared in the columns of The Journal it is impossible to do more than to indicate the general character and scope of a work of this sort. We must leave to the individual reader the task of a more thorough analysis, with the assurance that, while we cannot admit many of the author's premises, and hence cannot justify the conclusions

therefrom, and think, moreover, that in general the data are too restricted to sustain his inferences, there is much in the work to commend it to the thoughtful student, and we think it not at all improbable that the author has established an hypothesis which may ultimately constitute the basis for a true science of therapeutics, a consummation for the accomplishment of which he has our most hearty good wishes. W. H.

A HAND-BOOK OF UTERINE THERAPEUTICS AND OF DISEASES OF WOMEN. By Edward John Tilt, M. D., Member of the Royal College of Physicians, etc., etc. Second American edition thoroughly revised and amended. New York: *D. Appleton & Co.*, 90, 92 and 94 Grand Street, 1869. Pp. 345. Chicago: *W. B. Keen & Cook.*

This edition of a well-known and exceedingly useful book has been prepared by the author expressly for the American publishers. It would be a work of supererogation to say that this is now a standard treatise on the subject.

THE HEALTH-LIFT: Its Theory and Practice.

A beautifully-printed monograph of 38 pages, expounding the advantages of this particular mode of exercise, with a sketch of the principles upon which it is based. For sale at the city bookstores.

BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY. Part LVIII—January. Uniform American edition. New York: *W. A. Townsend & Adams.* Chicago: *The Western News Company.* Paper. Pp. 304.

ARCHIVES OF OPHTHALMOLOGY AND OTOLOGY. Edited and published simultaneously in English and German. Prof. H. Knapp, M. D., in New York, and Prof. S. Moos, M. D., in Heidelberg. New York: *William Wood & Co.*

Prospectus.—The work is to be issued half-yearly, in parts of about three hundred octavo pages each, fully illustrated by fine engravings and superb chromo-lithographic plates. Subscription Price $7.00 *per annum* in advance.

Items.

Difficult and Tedious Labor—With inertia of the uterus and rigidity of the *os*, especially in primiparous cases over thirty years of age, is treated by our friend J. W. Dora, M. D., of Mattoon, as follows:

"After having administered either chloroform by inhalation or having applied ung: belladonnæ to the *os* for the purpose of promoting dilitation of the same. I give, viz:

Fld ext. of Ergott	℥ j.
Chloroform	℥ ss.
Syr. of Acacia	" "

M. Sig. Teaspoonful every 20 or 30 minutes until the labor is well established, which I have never known to fail after the third dose, and repeat at such intervals as may be indicated afterwards. It has never disappointed me, and I never knew any unpleasant results from its use, either to the mother or child. J. W. Dora."

The Craig Microscope.—This little instrument, afforded at the trivial price of $2.75 (See our advertising sheet), is really a very clever affair. It magnifies, we should judge, from 80 to 100 diameters, and is easily adjusted. In the absence of more expensive instruments it can be employed very satis-

factorily in the study of the minute anatomy of tissues, and in the examination of the epithelium in cutaneous diseases, the blood, pus, mucous, urine, etc. A couple of cuts are subjoined which illustrate the instrument and its mode of use, and, also, its exhibition of a bee's tongue.

The Summer Course of Examinations and Lectures in connection with the Summer Lectures at the Jefferson Medical College, will begin on Tuesday, April 13, 1869, at 8.45 o'clock, A. M., at the Philadeldhia School of Anatomy, Chant street, (Tenth street above Chestnut.)

The examinations will be held daily, excepting Wednesday and Saturday, and will have direct bearing on the lectures and clinics. Lectures will also be delivered by Dr. Hutchins on Diseases of Women, with clinical facilities to the class, and by Dr. Allis on Physiology. The examinations and lectures will be illustrated by diagrams, models, cabinet of materia medica, etc. Office students will be taken by either members of the Association.

Dr. Keen, Anatomy and Chemistry; Dr. Hutchins, Obstetrics, Practice and Materia Medica; Dr. Allis, Surgery and Physiology.

Fee for the Examinations, $20. Fee for Office Students, (one year, including Winter and Summer Examinations,) $100. For further information apply at the Rooms, or to

W. W. Keen, M. D., 1619 Chestnut Street.
E. R. Hutchins, M. D., 269 So. 5th Street.
O. H. Allis, M. D., 221 So. 9th Street.

Lithograph.—Mr. Chas. Keil, Janitor of Rush Medical College, has had engraved, from photographs, a sheet containing the portraits of the present Faculty of the College. In the main the likenesscs are very good. Copies will be mailed postpaid to those desiring them, by enclosing $2.00 and addressing,

CHARLES KEIL,
Rush Medical College, Chicago.

Special Notice to Subscribers.

Upon the books of The Journal appear the names of a large number of subscribers who are in arrears for subscriptions. We have had an immensity of trouble in correspondence about this thing, and wish to have everything cleared up at once. To any subscriber who is in arrears we propose this: Pay at once what you think you owe, and so state, and we will balance your account on our books. We are tired and disgusted at looking over the old ledger, and have ordered a new one which we mean shall be a *clean* record.

Annual Announcement of the Spring Term for 1869.

The Session will commence WEDNESDAY, March 3d, 1869, and continue to the 1st of July.

The Faculty will be assisted by the following gentlemen:

W. R. MARSH, M. D., Instructor in the Principles and Practice of Medicine.

J. H. ETHERIDGE, M. D., Instructor in Materia Medica.

C. T. PARKES, M.D., Instructor in Anatomy.

HENRY M. LYMAN, M. D., Instructor in Physiology.

CURTIS T. FENN, M. D., Instructor in Obstetrics.

J. N. DANFORTH, M. D., Instructor in Toxicology and Medical Jurisprudence.

H. F. CHESBROUGH, M. D., Demonstrator of Anatomy.

W. C. HUNT, M. D., Instructor in Microscopical Anatomy and use of Microscope

---

The Course will consist of daily lectures and recitations at the College, and Clinical observations in the Hospitals, Infirmaries, and Dispensaries of the City.

PROF. BLANEY will give instruction in Practical Chemistry, affording access for that purpose to the large and well-appointed Laboratory of the College.

PROF. POWELL will teach Surgery.

PROF. GUNN will conduct his Surgical Clinique at the College.

PROF. ROSS will conduct the Medical Clinique and instruct in Physical Diagnosis and Diseases of the Chest.

The County Hospital will afford two Medical and Surgical Cliniques each week.

The Marine Hospital will be open to students of the Course.

The Charitable Eye and Ear Infirmary is located near the College and will be open every day of the week for Clinical teaching, by PROF. HOLMES, Lecturer on Diseases of the Eye and Ear.

The College Dispensary will be open every day, affording to students an excellent opportunity for perfecting themselves in the art of diagnosis.

The Dissecting Room will be kept open during the entire session, and will be abundantly supplied with material for the study of Practical Anatomy.

Special instruction in Practical Chemistry will be given by Prof. Blaney, to such as desire.

Graduates of the College will be admitted to the Spring Session on the matriculation ticket. All others will be required to procure tickets.

Fees for the Spring Term—exclusive of Hospital and Demonstrator's Tickets—$20.

Certificates of attendance upon the Full Course will be considered the equivalent of time passed under the instruction of a medical practitioner during the Spring and Summer months of the year.

Every student of medicine is urged to consider the advantages to him of remaining in the city during the spring and summer, when the best opportunities are afforded for successful study. The hospitals and dispensaries are then overrunning with material illustrative of disease, and the student may have these facilities at a comparatively trivial expense.

He needs access to libraries and reading rooms; and, above all, he needs to become familiar with earnest men in the profession, that his character may be stamped by the example of their industry and habits of attention. He needs a text-book, daily and hourly illustrated in the street, the class-room, the laboratory, the hospital ward, and the dead-house, and the active rivalry of associates—a sure road to excellence.

The design of the Course is that it may supply the want of a numerous body of students who must pass the time more or less unprofitably while removed from the best appliances during a long vacation. The majority of medical students in the Northwest do not need to be reminded of the value of time and money. A year given to close observation under the tutelage of the College will insure practical ability with prospect of immediate reward. The College offers to become Preceptor as well as *Alma Mater*, that the highest lustre may be given its *Almuni*.

For the Annual Catalogue of the College, and for additional information concerning the Spring Session,

Address,

Dr. E. POWELL, *Treas., 45 S. Clark St.*

Students arriving in the City are requested to call at once upon the Janitor, Mr. CHARLES KEIL, at the College Building, corner of North Dearborn and Indiana streets, Chicago.

The Twenty-seventh Annual Session of the regular Course of Lectures will commence on Wednesday, September 29th, 1869, and continue eighteen weeks.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—MARCH 15, 1869.—No. 6.

ORIGINAL COMMUNICATIONS.

Analysis of Hot Springs, Arkansas.

MADE BY E. HILLS LARKIN, OF ST. LOUIS, MO., JUNE 1, 1859.

NUMERICAL CONSTITUENTS—8½ PER GALLON.

	PERCENTAGE.
Silicic Acid	24.74
Sesque-Oxide of Iron	1.21
Alumna	5.15
Lime	28.83
Magnesia	.73
Chlorine	.67
Carbonic Acid	21.36
Organic Matter	8.31
Water	1.72
Sulphuric Acid	4.49
Potassa	1.46
Soda	2.01
Total	100.00

To the above analysis, Bromine and Iodine should be added; for in 1859 Dr. David Dale Owen extracted the

solid residue from 2,000 grammes, with alcohol; evaporated this to dryness at a low temperature, and tested it with proto-chloride of palladium. The watery solution was slightly tinged yellowish-brown, indicative of a trace of sodium; "and," says Dr. Owen, "if larger quantities of the water were operated on, the Iodine and Bromine could, in all probability, be distinctly brought out."

I have noticed, briefly, the constituents of these valuable waters, as given by able minds, and will now as briefly notice their action upon the diseased system:

It has been my province, for the past two years, to treat, with the assistance of these issues, many forms of chronic disease, such as rheumatism, gout, stiff-joints, contraction of the muscles, and skin-diseases as a class; scrofula, enlargement of the glands, general debility, spinal diseases, neuralgia, nervous affections, dyspepsia, nervous and mucous paralysis, in its varied forms, uterine diseases as a class, mercurial, mercurio-syphilitic, and all forms of syphilitic disease. Many diseases, which are too numerous to mention, are likewise benefited by the judicious use of the waters; but the most marked improvement is shown in rheumatism, gout, skin-diseases, neuralgias, uterine affections, mercurial and syphilitic.

In many cases referred to, their effects are truly astonishing.

The copious diaphoresis which the hot-bath establishes opens in itself a main channel for the expulsion of principles injurious to health, which is made manifest through the pores of the skin, and by the peculiar odor; it alike arises from the internal use of the water, in a diminished degree. The impression produced by the hot-douche, as is referred to, is indeed powerful, arousing into action sluggish and torpid secretions; hence the languid circulation is purified of morbific matter; renewed vigor and healthful action are thus given to the absorbents, lymphatics, and to the excretory apparatus, a combined effect which no medicine is capable of accomplishing.

The carbonates of the alkalies and alkaline-earths, by their reaction cannot be without their therapeutic effects, as is shown by observation, over the diseases mentioned.

The chlorides and sulphates, although small, have their effects upon the physical economy.

The exhilarating effects upon the system of the large quantities of free carbonic-acid, which the water contains, proves an auxilliary in sustaining the system during the change of tissue, and of the blood, which is consequent upon their constant and continued use.

In the above diseases tonics and alteratives are demanded; hence the potency of the waters will seem tangible to the minds of the profession, when conjoined with proper treatment and sound advice.

The mild latitude and even temperature of this section of Arkansas make it a truly desirable resort for invalids, throughout the entire year. For the past two years I have watched closely the thermometer, and find, in mid-summer, the hottest day reached only 96° Fahr., while, this winter, our coldest day did not fall below 28° Fahr. (above zero).

Daily stages reach this point from the Capital of the State.

P. N. Ellsworth.

Hot Springs, Ark., Feb. 17, 1867.

Cases of Malformation of the Eye and Ear—Anophthalmos.

REPORTED AT A MEETING OF THE CHICAGO MEDICAL SOCIETY.

Dr. Holmes reported two cases of congenital absence of both eyes, which had very recently fallen under his observation. The reporter stated that such cases were exceedingly rare, even in the aggregate experience of occulists.

One of the infants, a female, of German parentage, was born January, 1868. The parents were perfectly healthy,

as also were two other children. They could ascribe no cause for the abnormal condition of their last child.

With the exception of the absence of the eyes, and an abnormally narrow palpebral tissue, the child, as far as could be observed, was strong and perfect. When it was at rest, one could scarcely remark any thing unusual in its appearance. The brows were very full, the cheeks high. The orbits were not large enough to fairly receive the tip of the fore-finger. On passing two probes into either orbit and separating them, the edges of the lids, not more than the fifth of an inch in length, could be seen at the depth of nearly half-an-inch, in the small, conical cavity of the orbit. Between the lids mucous membrane could be seen, but no trace of a globe except in the left orbit, in which was a minute, reddish elevation behind the lids.

The child grew well till July, when it was attacked with cholera infantum, and died after a few weeks.

The second case, also a female, under the care of Dr. H. M. Lyman, presented almost precisely the same appearances. There was, however, a malformation of the nose, in two respects. There was a slight triangular deficiency of the outer wall of the right nostril, near the tip of the nose. The nose was not placed exactly in the median line of the face, but obliquely towards the left side. There was, also, a peculiar ridge extending from the nose obliquely upward and to the left, over the left os frontis. In other respects the child, a first-born, was perfect. The parents, American, could give no cause, even imaginary, of the deformity, *congenital absence of the external meatus.*

Dr. Holmes also reported two cases of congenital absence of the external meatus, which he had observed during the last three weeks.

A girl, eight years and three months old, of German parentage, was brought for advice regarding her hearing.

She was pale, and presented a very peculiar expression of the face, the head being exceedingly thin; the external wall of each orbit being deficient far toward the ear

There was also a deficiency of the orbital border of the superior maxillary bone, of the malar bone and zygoma. The lower jaw was somewhat receding; the teeth were irregular, but not notched. The roof of the mouth was abnormally arched. The right ear presented the following peculiarities: There were, externally, simply the lobe and mere rudiments of the upper portion of the pinna, and of the tragus and anti-tragus. There was not a trace of an external meatus.

The left ear presented precisely the same appearances, although the rudiments of the external ear were somewhat differently arranged.

The patient could understand loud conversation, but was so diffident that it was impossible to determine the distance at which she could hear a watch. The hearing was improved by opening the mouth.

In less than three weeks after this patient consulted Dr. H., a German lithographer, twenty-three years of age, sought advice in reference to his myopia. He remarked during the examination, that he had no right ear. There was the same condition as in the case just described. The pinna, however, was somewhat more extensively developed. The hearing was more deficient than in the preceding case. He could not hear a watch placed over his ear.

Dr. Holmes also reported the case of a little girl, one year old, in which there seems to be a congenital paralysis, or possibly an absence of the levator muscle of each upper lid. The palpebral fissure is abnormally short, the globes themselves being remarkably small. The lids appear almost absolutely closed. No known injury occurred to the child, either at or after its birth. She is healthy and vigorous, with no other peculiarity in her formation. Vision is acute, as shown by the manner in which the child sees and seizes minute objects.

The head is invariably thrown back whenever the child attempts to look at any thing. This seems to cause the lower lid to fall a line or more from the upper lid. As

there is scarcely the slightest motion to the upper lids, it is doubtful how much benefit could be gained by surgical treatment, without danger of inflammations from exposure of the cornea to the action of dust and the atmosphere.

EXOPHTHALMOS.

Dr. H. recalled attention to the patient with enormous exophthalmos whom he presented to the society some time since, stating that he now has, under his care, a patient afflicted with the same form of congenital disease.

The eyes were also enormously protruded from the orbit; the right one to such an extent that the lids, though greatly hypertrophied and distended, no longer covered the cornea. The motions of this eye were much impeded; those of the other eye nearly normal.

In consequence of an injury of the right cornea, and long-continued exposure to the atmosphere, the vision was already destroyed. There was great pain in the eye, with sympathetic irritation of the cornea in the other eye, to relieve which symptoms the right eye was extirpated.

The refraction and accommodation of the eyes had always been normal.

After the wound caused by the extirpation healed, the lids remained nearly as prominent as if closed over a normal eye.

The patient stated that his father, brother and sister, were born with the eyes abnormally prominent, although the brother's eyes became especially affected at the age of fifteen. The appearance of the brother's would naturally suggest the thought that they were suffering from Graves' (Basedows') disease. There were, however, no evidences of anæmia, or of disease of the heart or thyroid gland.

CORRESPONDENCE.

Cincinnati, Ohio, March 4, 1869.

My Dear Dr.:—The past two weeks have witnessed the Commencements of all our Ohio Medical Schools. The classes have not fallen far short of former years (since the war.)

The Cleveland Medical College had 123 students. The number composing the graduating class is not known to me. The Charity Hospital Medical College had about eighty students. I do not know the size of the graduating class in this school.

I am informed, however, that it is proposed to remove this school to Worcester, an interior town of this state, where it will be connected with a university. Professor Feristone, who is the life of the school, resides at Worcester.

The class of Starling Medical College, of Columbus, numbers seventy-five or eighty.

The Commencement exercises of the Cincinnati College of Medicine and Surgery, twenty-fifth session, on Longworth street and Central avenue, were held, Feb. 16th., in the Christian church, on Sixth street near Mound, in the presence of a large assembly of ladies and gentlemen.

The exercises were commenced with prayer by Rev. James Black, and consisted of addresses and the conferring of the degree. Rev. M. Lilienthal, D. D., addressed the graduates and conferred the degree on the following persons:

M. L. Amick, Scipio, Indiana; J. H. Anderson, New Haven, Indiana; E. B. M. Browne, Cincinnati; W. E. Caddy, Baltimore; Sam. W. Craig, Cincinnati; H. B. Denman, Piqua; Hugh Ferguson, Maxville; Edwin G.

Keifer, Fairfield; Charles A. Lynd, Cincinnati; F. P. Martin, New Matamoras; D. B. Mozee, Cordova, Kentucky; M. C. Mercer, Fairfield; H. F. McCullough, Livonia, Indiana; A. J. McIntosh, Armstrong, Illinois; T. McFeely, Newport, Kentucky; J. A. McKinnon, Oak Harbor; B. B. Potter, Roundhead; S. Broztman, Yellow Springs; S. M. Royer, Williamsburg, Pennsylvania; T. J. Smith, Wakatomica; J. Q. A. Robbins, Abington, Indiana; J. T. Scott, Rutland, Kentucky; A. M. Seatan, Midway; F. Stubbeman, Cincinnati; J. M. Stutzman, Yellow Springs; F. M. Thomas, Scott; W. F. Wood, New Bremen; W. H Yelton, Bradford, Kentucky; Wilson Hobbs.

This school is in a flourishing condition, having, during the past few years, been imbued with new life. Its Prof. of Surgery, Dr. D. S. Young, is completing his work on Military Surgery. The school has, during the year, lost a valuable member, by the resignation of Prof. Carroll.

The Commencement exercises of the Ohio Medical College for the present term, were held at eleven o'clock, March 1st., in the lecture-room of that institution. Beside the class of graduates, there were a great many visitors, among them a number of ladies. The exercises were opened with prayer by Rev. Mr. Gamble, after which diplomas were given to the students, some seventy in number. The congratulatory address was delivered by Judge Wm. Dickson.

It was well received, upon the whole; but the following remark may be accounted for by the well-known disposition of our countrymen to too often become overawed by a visit to foreign climes:

"A French chemist discovers chloroform, and the inquiring genius of a Scotch physician utilizes it in the discovery of its anæsthetic properties."

This statement is calculated to mislead those who are not informed, into the belief that our countrymen have no claims in that direction.

The following are the graduates receiving diplomas:

S. W. Anderson, Henry J. Abbott, John D. Axline, Chas. F. Basford, William E. Burch, Daniel L. Brown, John H. Bruce, Clinton Brown, Joseph R. Ballard, Simon L. B. Blacke, Samuel L. Beeler, A. L. Chenoweth, George B. Crawford, Robt. H. Culbertson, Perry D. Covington, Lawson Drais, Eber G. Dorr, W. Elijah de Courcy, Jesse O. Davy, S. B. Emerson, John B. Graham, John Ford, Elijah W. Ford, John P. Freeland, Douglass H. Harding, Thomas H. Harrison, P. E. Holland, Henry Haacke, Asa B. Isham, William H. Jones, J. S. Kelsey, John E. Markle, J. B. F. Morgan, Dennis F. Moss, J. W. McGinnis, John Mackay, jr., Thomas C. Moore, John G. McVay, Samuel B. Morgan, Nathan T. Noble, Thomas Orr, George B. Orr, T. S. Potter, Lieutellis L. Porter, L. S. Rice, John E. Rickey, Theodore N. Rafferty, Robert G. Redd, William H. Rogers, Henly C. Rutter, John C. Sloan, Wm. G. Smith, N. W. Spring, Oliver H. Saxton, Beverly W. Sullivan, Edwin J. Thorn, William E. Tucker, Waddy Thompson, George F. Thomin, Will W. Vinnedge, Daniel Wilson, J. Owen Wall, John H. Willard, James M. Wood, Jonathan M. Wright, Holmes T. Wilson, Jeff. D. Young, Martin V. Young.

Prof. M. B. Wright, who has for near a quarter of a century been connected with the school as Prof. of Obs., retires. His usefulness and ability as Prof. and Dean will long be remembered.

The complimentary banquet given by the Faculty of the College to the graduates of the session took place at the Walnut-Street House the previous evening. The occasion was one for social enjoyment and intercourse, and was improved by the graduates and their friends.

This banquet and that of the Cincinnati College (which took place on the evening of their Commencement) were attended almost exclusively by the students and members of the faculties. The high tone characterizing these entertainments do credit to the discernment of the managers.

Last, but not least, came the Ninth Annual Commencement Exercises of the Miami Medical College, held in the College building, on Twelfth street, between Elm and Plum streets, March 2d, in the presence of the Faculty and a large number of ladies and gentlemen, the friends of the graduates and students, and of medical education in this city.

The exercises were conducted by Professor George Mendenhall, Dean of the Faculty, and were opened with prayer by Rev. Dr. Burns.

Prof. Mendenhall introduced the graduates in a body to Right Rev. C. P. McIlvaine, Episcopal Bishop and President of the Board of Trustees, who, after a few pertinent remarks, proceeded to confer the degree upon the following graduates:

O. F. Adams, Frankfort; James Anderson, Versailles, Ind.; J. Bowman, Elora, Ill.; L. B. Bitz, Evansville, Ind.; W. P. Baily, Stanford, Ind.; S. A. Craig, Triadelphia, W. Va.; F. G. Cross, Konoma, Canada; J. W. Cline, Eaton; James W. Dawson, Cincinnati; A. W. Bavis, St. John, N. B.; D. W. Estil, Bluffton, Ind.; F. R. Eakins, Wheelersburg; E. A Eakins, Ironton; E. C. Farquhar, Putnam; W. W. Foley, Indianapolis, Ind.; James F. E. Fanning, Tiffin; H. S. Green, Cardington; Henry Illowy, Cincinnati; Jacob Kindell, Covington; Wade M. Logan, Cincinnati; B. F. Lamb, Richmond, Ind.; V. T. Lindsay, Warsaw, Ky.; L. S. Lambert, Victoria, Ill.; T. M. Lowry, Fort Recovery; D. D. Moore, Spring Valley; W. S. Mendenhall, Zionsville, Ind.; J. Maatin, Caldwell; R. J. Owens, Brookville, Ind.; J. L. Quinn, Eaton; Thomas C. Rogers, Belfast; J. B. Kitchey, Pomeroy; Isaac Redrow, Fayetteville; Hiram Shepard, Newport, Ind.; W. L. Stoneberger, Osborn; W. H. Spilman, Andersonville, Ind.; J. M. Spear, New Vienna; J. H. Smith, Baltimore, Md.; Jas. O. Steele, Robinson, Ill.; S. S. Selvey, Albany, Ind.; S. D. Tomlinson, Bloomingdale, Ind.; Wesley Thompson, Rensalaer, Ind.; T. M. Todp, West Alexander, Penn.; S. B. Sheldon,

Westboro; W. H. Vandusen, Miner's Point, Wis.; Levi Wild, Cincinnati; Geo. A. Way, Graysville.

The Valedictory address of Prof. Clendenin was very good.

The exercises were closed with the apostolic benediction by Dr. Bruns, after which the graduates were invited by the Faculty to the residence of Dr. Richardson, on Eighth street, where an elegant supper was served up and heartily enjoyed by the company, including a number of invited guests, among whom were prominent physicians and non-professional citizens.

The occasion will long be remembered by the numerous friends of the Faculty, and Prof. B. F. Richardson, in particular, whose liberal hospitalities they enjoyed.

At a meeting of the Cincinnati Academy of Medicine, the following officers were elected for 1869.

President, Dr. W. W. Dawson; First Vice President, Dr. W. B. Davis; Second Vice President, Dr. C. S. Muscroft; Secretary, Dr. J. L. Neilson; Treasurer, Dr. S. J. Unzicker; Corresponding Secretary, Dr. E. Stevens; Librarian, Dr. Hiram Smith; Trustees, Drs. J. J. Quinn, R. McIlvaine, and J. P. Walker.

The Commencement exercises of the Ohio Dental College took place last evening, at half past seven o'clock, in the hall of the College. An address was delivered, and the degrees conferred, by Dr. Keely; also, a valedictory address on behalf of the Faculty, by Prof. E. Rives.

It is hoped that the arrangements being made by Prof. P. S. Connor, of this city, chairman of the committee of arrangements for the excursion to the New Orleans meeting of the American Medical Association, will be satisfactory.

Members who attend from the East will be delighted to view the scenery of the Ohio and Mississippi valleys at this (May) season of the year. Besides, after a seventy-two hours' ride by rail the luxury of one of our palatial steamers will be highly appreciated. In this manner the

trip will be made within the means of almost any one who desires to go.

Prof. Connor will issue a circular as soon as definite terms are concluded. It is contemplated that the steamer or steamers will make the round trip from Cairo, Louisville or Cincinnati in twelve or fourteen days, furnishing food and lodging while in port. S.

J. Adams Allen, M. D.:

Dear Doctor:—Having a case in practice I suppose will interest your numerous readers of The Journal, I report it in brief.

March 1st.—Was called in council to see a patient supposed to have spotted fever. The patient, twenty-eight years of age, presented the well-marked purple patechiæ and ecchymosis of purpura febrilis.

A very peculiar tone of the voice led me to examine the patient very closely, as there was nothing in the purpura to cause alarm. The face was smooth and fair as an ordinary female. But in answer to my question as to whether she had menstruated naturally, she began to cry, and finally requested her attendants to leave us alone. I then proceeded to make a thorough examination of the sexual organs and found the general appearance of the mons veneris natural in appearance except a fullness of the labia on the left side; a rather more than ordinary growth of hair. But a closer inspection revealed a fully developed penis in the place of a female urethra, with its head tied down by the labia above the natural place for the clitoris. On the left side was a fully developed ovary imbedded in the folds of the labia, with no appearance or pretence of a scrotum. The labia and vagina below appeared as in ordinary women until the finger reached in some two inches, when it met a hard, bony substance, which was unresisting, and in shape of the figure 8. Here the sphincter anis and cervixuteri

presented themselves closely connected in an osseous state, both openings being sufficient to admit a finger, but separate and distinct from each other; and both unyielding and inelastic. I introduced a womb sound into the uterus one inch, but it seemed hard, and gave such uneasiness to the patient I ceased further examinations.

There are two remarkable features in this case: 1st. The face of this patient was smooth and fair as any ordimary lady. 2d. There was no outside appearance of anus through the perineum, and the only outlet to the rectum was through the vagina.

The patient had always been healthy, never menstruated, nor ever experienced a feeling of passion. And her sex or condition was not known by any one of the family, being an orphan.

Very Truly Yours,

L. A. Babcock, M. D.

Freeport, Ill., March 11, 1869.

PROCEEDINGS OF SOCIETIES.

American Medical Association.

The twentieth annual session will be held in New Orleans, La., May 4, 1869, at 11 A. M.

The following committees are expected to report:—On Diseases of the Cornea, Dr. Jos. S. Hildreth, Illinois, Chairman. On cultivation of the Cinchona Tree, Dr. Lemuel J. Deal, Pennsylvania, Chairman; On Excision of Joints for Injuries, Dr. J. B. Reed, Georgia, Chairman. On the Cryptogamic Origin of Disease with special reference to recent microscopic investigations on that subject, Dr. Edward Curtis, U. S. A., Chairman. On Operations for Hare-lip, Dr. A. Hammer, Missouri, Chairman. On Clinical Thermometry in Diptheria, Dr. Jos. G. Richardson,

New York, Chairman. On Prophylactics in Zymotic Diseases, Dr. Nelson L. North, New York, Chairman. On Inebriate Asylums, Dr. C. H. Nichols, D. C., Chairman. On the Influence of the Pneumogastric Nerve on Spasmodic and Rythmical Movements of the Lungs, Dr. Antisell, D. C., Chairman. To examine into the Present Plan of Organization and Management of the United States Marine Hospitals, Dr. D. W. Bliss, D. C. Chairman. On the Utilization of Sewerage, Dr. Stephen Smith, New York, Chairman. On the Influence of Quarantine in Preventing the Introduction of Disease into the ports of the United States, Dr. Elisha Harris, N. Y., Chairman. On Nurse Training Institutions, Dr. Samuel D. Gross, Pennsylvania, Chairman. On Commissioners to aid in Trials involving Scientific Testimony, Dr. John Ordronaux, N. Y., Chairman. On Annual Medical Register, Dr. John H. Packard, Pennsylvania, Chairman, On Devising a Plan for the Relief of Widows and Orphans of Medical Men, Dr. John H. Griscom, N. Y., Chairman. On Veterinary Colleges, Dr. Thomas Antisell, D. C., Chairman. On Specialties in Medicine, and the Propriety of Specialitists Advertising, Dr. E. Lloyd Howard, Maryland, Chairman. On Library of American Medical Works, Dr. J. M. Toner, D. C., Chairman. On Vaccination, Dr. Henry A. Martin, Massachusetts, Chairman. On the Decomposition of Urea in Uræmic Poisoning, Dr. H. R. Noel, Maryland, Chairman. On the best method of treatment for the different forms of Cleft Palate, Dr. J. R. Whitehead, New York, Chairman. On Rank of Medical Men in the Navy, Dr. N. S. Davis, Illinois, Chairman. On Medical Ethics, Dr. D. Francis Condie, Pennsylvania, Chairman. On American Medical Necrology, Dr. C. C. Cox, Maryland, Chairman. On Medical Education, Dr. J. C. Beeve, Ohio, Chairman. On Medical Literature, Dr. E. Warren, Maryland, Chairman. On Prize Essays, Dr. S. M. Bemiss, Lousiana, Chairman.

On the Climatology and Epidemics of———Maine, Dr. J. C. Weston. New Hampshire, Dr. P. A. Stackpole.

Vermont, Dr. Henry James. Massachusetts, Dr. H. I. Bowditch. Rhode Island, Dr. C. W. Parsons. Connecticut, Dr. E. K. Hunt. New York, Dr. W. F. Thoms. New Jersey, Dr. Ezra M. Hunt. Pennsylvania, Dr. D. F. Condie. Maryland, Dr. O. S. Mahon. Georgia, Dr. Juria Harris. Missouri, Dr. Geo. Engelman. Alabama, Dr. R. F. Michel. Texas, Dr. T. J. Heard. Illinois, Dr. R. C. Hamill. Indiana, Dr. J. F. Hibbard. District of Columbia, Dr. T. Antisell. Iowa, Dr. J. C. Hughes. Michigan, Dr. Abm. Sager. Ohio, Dr. E. L. Neal. California, Dr. F. W. Hatch. Tennessee, Dr. B. W. Avent. West Virginia, Dr. E. A. Hildreth. Minnesota, Dr. Samuel Willey. Virginia, Dr. W. O. Owen. Delaware, Dr. L. B. Bush. Arkansas, Dr. G. W. Lawrence. Mississippi, Dr. ——— Compton. Louisiana, Dr. L. T. Pimm.

Secretaries of all medical organizations are requested to forward lists of their Delegates as soon as elected, to the Permanent Secretary.

Any respectable physician who may desire to attend, but cannot do so as a delegate, may be made a *member by invitation*, upon the recommendation of the Committee of Arrangements.

W. B. Atkinson.

Delegates to the American Medical Association.

The undersigned are fully authorized to announce that arrangements have been completed with the proper rail road officers, by which all delegates and members of the American Medical Association who desire to attend the annual meeting in New Orleans on the first Tuesday in May, can go from Chicage, by way of Louisville, Nashville, etc., direct to New Orleans, by paying the ordinary fare ($35.00) in going, and be returned *free*, with the privilege of stopping over at the Mammoth Cave, in Kentucky, if they choose. Similar arrangements are in progress, with a fair prospect of completion, with all the connecting lines

of rail road at this place and southward. It is confidently expected that such liberal arrangements on the part of the rail road officers will secure a large attendance of members from the North and Northwest.

CHICAGO, March 3d, 1669.

N. S. DAVIS,
R. C. HAMILL,
A. FISHER. } Committee.

Illinois State Medical Society.

The next annual meeting of the Illinois State Medical Society will be held in the city of Chicago, on the third Tuesday in May, 1869, commencing at 10 o'clock, A. M. All local medical societies are entitled to one delegate for every five members. It is desirable that every county in the State should be represented.

CHICAGO, March 3d, 1869.

N. S. DAVIS, *Perm't Secretary.*

Carroll County Medical Society.

The second regular meeting of this society was held in Lanark on the 23d of Febuary, ult.

Dr. John L. Hostetter, President elect, presiding.

Minutes of previous meeting were read and approved.

Dr. N. Stephenson, of Thomson, read a paper on the nature of the acton of chloroform as an anæsthetic agent.

This was a very able production and showed that the Doctor has been a very close observer of the action of this article. He advanced some very correct ideas as to its peculiar action in some cases, and gave some very excellent advice as to the mode of administering this agent.

Dr. J. Haller, of Lanark, read a paper on the action of Gelseminum Sempervirens, but modesty will not allow any comment upon our own paper.

Some of the members having been requested to read papers, asked for further time.

There was considerable discussion on some of the ideas set forth in the papers read, which passed off very agreeably to all. This is what we want, viz: Free expression of views, and reports of our experience in these matters. By so doing we will be enabled to combat disease more successfully, and make the practice of our noble profession more pleasant.

Dr. Hostetter not having a paper prepared on Medical Ethics, offered a verbal report, in a few well timed words, to wit: Labor diligently and unitedly for the good of suffering humanity. "In all things whatsoever ye would that men should do to you, do ye even so to them."

The following were requested to read papers at our next meeting, (and also those who did not read at this meeting, are requested to be prepared at our next:)

On Obstetrics, Dr. Jno. L. Hostetter, of Mt. Carroll. On the Etiology and nature of "Shock," Dr. N. Stephenson, of Thomson.

On motion of Dr. J. Haller, it was decided to hold the next meeting of this society in Mt. Carroll, on the second Tuesday of June next, at 10 o'clock, A. M. We hope to see a good attendance at that time. All members of the Press, and Clergymen favorable to a *rational* system of medicine, are invited to meet with us.

JNO. L. HOSTETTER, *Prest.*

J. HALLER, *Sec'y.*

EDITORIAL.

A New Defense for Murder.

There are perhaps few of our readers who have not been by turns amused, disgusted and wearied at the frequency with which, of late years, the plea of insanity has been urged as an excuse for crime. Nothing appears so suggestive of the existence of insanity previously unsuspected as the perpetration of some outrage upon society, and nothing so refreshing to the memories of witnesses upon the subject of hereditary taints. It behooves the Thugs and cut-throats to overhaul their genealogical registers and to trace, if possible, their relationship to some crack-brained ancestor, some lunatic aunt, or delirious uncle, whose possible bequest of his malady may prove an inestimable treasure: more precious than fine gold, or even five-twenties; for it may save his (or her) neck from a halter. It becomes a question for the consideration of parents, whether a legacy of delirium tremens or epilepsy be not quite as valuable an inheritance for their children as a life insurance policy. It certainly has affected many times what the latter never has—insured life. But our cousins, the other doctors (of the law) appear to be widening their field of philanthropy. Some individual in haste to get rich, commits a forgery, and he is straightway found guilty —not of crime—but of moral insanity. A woman shoots her lover (or some other woman's) and she is found guilty of menstrual irregularity. Again, a man shoots his employer, and threatens to shoot others, and he is found guilty of epilepsy. We do not discover, however, that any means have been taken to prevent a repetition of these diverting eccentricities of genius, their perpetrators decided by verdicts of juries to be legally irresponsible agents, being still permitted to go at large. And as the class

exempted from legal responsibility threatens to become so large that it cannot by any possibility be expelled from society, would it not be well for the Legislature to provide a sane asylum for the reception and protection of all those who desire neither to kill nor yet to be killed. The abolition of the death penalty is "a consummation most devoutedly to be wished," and should be effected just as soon as the assassins set the example.

* * * Ill., March 2, 1869.

Editor Medical Journal:

There are "physicians" in Chicago advertising for partners with "a small capital." These "physicians" hold out dazzling inducements to young graduates, alleging that their business brings them several thousands of dollars each year; that the new partner will be received on equal shares, by paying $1,000 or $1,500 down. That they are regulars, and are called in consultation with members of Rush College Faculty frequently, etc. Their books are open to inspection, and show a stunning array of cash receipts. Please allow me to say they (the "physicians") are *rascals*, and that any young physicians who pay their money to such men will be swindled. The graduates from Rush are, many of them, seeking openings, and will be drawn to Chicago by these tempting advertisements, and taken in. Most, if not all, of these graduates take your Journal. Dr. * * told me I better call your attention to this matter, and ask you to state briefly in your next issue that these advertising men are *swinders*, and then none of our boys will be defrauded by such pests. Yours, truly

* * * *

It is scarcely necessary for The Journal to say more than has been well said by our correspondent. We have written scores of private letters to parties inquiring of us, denouncing these scamps as they deserve. It is a professional *confidence game*, and richly entitles its practitioners to the penitentiary.

Location for Practice.

Dr. E. Hollinsworth, of National, Clayton County, Iowa, will sell his residence, (a fine one) and practice, for $2,000. He is the only physician in the place, and the field is a good one.

A favorable opportunity may also be heard from by

addressing P. J. Mulvane, M. D., Wyanet, Bureau County, Illinois.

Urethral Sounds.

Bliss & Sharp, 144 Lake street, furnish a full case (12) with gauge and steel sounds, for $20. Same, silver-plated, $26. See their advertisement this number, for answers to further inquiries from correspondents.

Paper Collars.

A correspondent wishes to be informed through THE JOURNAL whether the profession have noticed that the wearing of paper collars produces sore throat and enlargement of the tonsils? He says: "I find it almost entirely among men and boys who wear them. Is it not the arsenic or some other poison used in glazing them?" We have not the data from which to reply, although aware of a common opinion of this purport, which may, and may not, have some foundation in fact. *Quien sabe?*

Back Volumes.

A. W. Dewey, M. D., of Cicero, Hamilton County, Indiana, has some twelve or thirteen back volumes of THE JOURNAL which he writes us he is willing to dispose of.

LOOT.

A Practical Point in the Treatment of Throat Diseases.

BY FREDERICK A. BURRALL, M.D.

"It is often a difficult matter to examine satisfactorily the throats of patients who are lying in bed. The head of the bed may be towards the window, thus placing the patient's mouth away from the light, and the glare of a lamp held before the face is often painful to the eyes of the sick. Sitting up in bed and twisted towards the light is a constrained, and, to a debilitated invalid, an exhausting position; and while a child would be willing to open its mouth, it would often rebel against sitting up for a throat examination. The physician, conscious that his patient is in a fatiguing attitude, hurries his investigations, and sometimes obtains but a perplexing view. These annoyances may be lessened or obviated by the use of a concave mirror, with a focal distance of about twelve inches. Daylight can be reflected into the throat of the patient, while he lies quietly in bed or slightly raised on pillows, and the lamp used for illumination at night can be placed above or at the side of his head. Of course it is well-known that such mirrors are used by those who are constantly treating diseases of the throat, but the object of this article is to recommend them to more general use. Much weariness would thus be spared the sick, and such a mirror is also useful for the examination of any cavity on a day or at night."—*Medical Gazette.*

The Case of Dr. Earle.

Our lively contemporary of the *Gazette* thus discourses:

"Tony Weller's impressive warning to his son: 'Samivel, beware of widders,' has received striking corroboration in Chicago, in the experience of Dr. Earle, of that city. His 'captiwation' in matrimony some years ago by a female of that description, was followed, according to the custom of the community in which they resided, by a divorce. Not having learned that to make overtures towards reconcilia-

tion to a woman who has injured one, is invariably considered by her as an unpardonable outrage, he imprudently sought to revive her affection; and roused to revenge by this crowning injury, she had him arrested on charges compared with which the wildest imaginings of 'blood and thunder' romancists sink into insignificance. Mutilated infant corpses in bureau drawers, or used as fuel in his office grate; smothered wails of infantile anguish issuing from unexpected corners; truculent boasts of his murderous exploits, and gleeful demonstrations of their details; these are some of the items of the tale she tells, and as its consequence Dr. Earle is now in prison. The whole question hinges on the credibility of female testimony, and we think that as a general formula it may may be stated that a woman's veracity is in inverse ratio to her malevolence."

Prof. Halford's Treatment of Snake Bites.

Prof. Halford, of Australia, has instituted a number of experiments on animals, with the view of discovering an agent which would avert the poisonous effects of the bites of venomous snakes. The subject, it is stated (*Lancet*, Jan. 30, 1869), has recently attracted a large amount of attention in that country, owing to the professor having employed his remedy—a solution of ammonia injected into the veins—with success in the case of a man exhibiting all the symptoms of snake poisoning in a dangerous degree. "A man was bitten by a venomous snake which he had taken into his hands, supposing it to be dead. Not long afterwards he became drowsy, and mentioned the occurrence to one of his mates. The latter immediately set about procuring medical assistance, but by the time it arrived the man was comatose, and his lower extremities paralyzed. Galvanism and other usual remedies were applied but without effect. In this extremity, the medical man first called in caused Dr. Halford to be telegraphed for. The case was the first opportunity he had had of applying his new treatment to a human being, and he at first felt some hesitation in resorting to it. An incision, however, was made through the skin, exposing the superficial radial vein, and the point of the syringe being introduced into the vein, the injection (of ammonia) was completed. The beneficial effect was immediate. From an almost pulseless state, and from a stupor verging on death, the patient speedily be-

and he is now reported to be nearly well. Whether the earlier treatment in any way contributed to the cure cannot, perhaps, be certainly known, but there appears to be little came conscious. He has been steadily recovering since, doubt—the medical men entertain none—that the case must have ended fatally but for Professor Halford's treatment. We require, of course, some further cases before the merit of the discovery can be determined. Ammonia is not a new remedy for snake bites, but Dr. Halford has the credit, unquestionably, of having applied it in a direct way by injection into the blood, so that its effects should be immediate and general. Its application in this way could only be made safe in skilled hands. The discovery was not fortuitous, but resulted from a consideration of the microscopical alterations which he found taking place in the blood vessels of animals subjected to the snake poison. It is only right to add, however, that the observations of Dr. Fayrer and others have failed to verify the statements made by Dr. Halford on the altered conditions of the blood-corpuscles.* We learn from a letter which Dr. Halford addressed to the *Melbourne Argus*, that he had previously instituted a series of experiments on the lower animals, and he publishes five of them which he performed on dogs. In four instances the treatment was successful. To carry out the treatment a solution of ammonia—of the strength of one part of strongest liquor ammoniæ to two parts of distilled water—and an ordinary hypodermic syringe are required. The ammonia is thrown directly, but gradnally, into the blood by puncturing any superficial vein, and may be repeated as its beneficial operation ceases."

Three other cases treated by Prof. Halford's plan are quoted in the *Med. Times and Gazette*, Jan. 30, 1869, one of which we will quote, as showing more clearly Prof. Halford's treatment:

"On November 11, a man came under my care, says Dr. Dempster, of Beechworth, for treatment for the bite of a

* Dr. S. Weir Mitchell, in a note to us, writes: "Dr. Halford's treatment is a perfectly rational means of rousing an enfeebled heart. Ammonia given by the mouth did not seem to me as efficacious as alcohol. Perhaps the latter might be used subdermically, or thrown into a vein with success where speedy effects are desirable. Dr. Halford is himself inclined to abandon the view he formerly held as to the condition of the blood in snake bites. The cause of the hæmorrhage after snake bites and of the widely distributed local extravasations, has been explained by me in the *N. Y. Med. Journal*."

blacksnake. He was bitten about 8 A. M., and after several minutes had elapsed he pricked and incised the wound. Before this, however, he felt very giddy. I did not see him for more than an hour afterwards, and treated him in the usual way, with brandy and ammonia, and scarifying the wound and applying ammonia. The man, however, fell into a state of stupor, and when I was called to him at midday, we could not rouse him. I therefore injected liq. ammon. fort. into the saphena vein, and also hypodermically. This affected him at once, and after the second injection he woke up, and became sensible; his pupils, which had before been very sluggish, acted well; and his pulse rose from fifty-six to seventy. After this he went on well, with the exception of violent vomiting for twelve hours. He is now (November 15) convalescent, but very weak. I, of course, continued the stimulant treatment, but I certainly attribute the man's recovery to the injection of ammonia, of which I altogether injected about twelve minims. Professor Halford mentions, with reference to this case, that the liq. ammon. fort. should be diluted before injection in such cases with two or three times its quantity of water, and of this mixture from twenty to thirty drops should be injected into one of the larger veins. The syringe, he adds, should be carefully introduced, so as to give the ammonia a fair chance. He disapproves of merely throwing the injection under the skin, and believes that after the injection of the ammonia there is no necessity for resorting to the use of stimulants. In a matter so important as this, the result of a few more experiments will be looked forward to with great interest by the public generally, as they will no doubt be by the profession."—*Med. News.*

Strength of Carbolic Acid Solutions.

"In view of the fact that carbolic acid is now largely in use in medicine, with a probability that its range of application will be increased, it is well for prescribers to be very careful of the particular preparation they employ. Instances are reported where much damage has been done by the external application of this substance in solution, and we ourselves have seen carbolic acid ordered from the apothecaries, in such a way as to evince plainly the fact of a most blissful ignorance of whether the medicine was a solid or a fluid, or in what proportions it was proper to

use it. Dr. W. T. Channing, of Providence, reports to the Boston *Journal of Chemistry* several cases of serious results, from the use of the concentrated fluid acid, which is dispensed by some under the name of 'solution carbolic acid,' when the prescribers intended only a milder solution, which they had been in the habit of using, but had obtained it from other druggists. Until, therefore, some distinctive nomenclature shall be given to the various preparations of this substance, and some official 'solution' shall be decided upon, physicians cannot be too careful in learning the strength of the solution employed, and it would be advisable to give explicit directions where to procure it."—*Philadelphia Reporter.*

Sea-Sickness.

The following rules are laid down by Prof. Fordyce Barber against Sea-sickness:

1. Have every preparation made at least twenty-four hours before starting, so that the system may not be exhausted by overwork and want of sleep. This direction is particularly important to ladies. 2. Eat as hearty a meal as possible before going on board. 3. Go on board sufficiently early to arrange such things as may be wanted for the first day or two, so that they may be easy of access; then undress and go to bed, before the vessel gets under way. The neglect of this rule by those who are liable to sea-sickness is sure to be regretted. 4. Eat regularly and heartily, but without raising the head for one or two days. In this way the habit of digestion is kept up, the strength is preserved, while the system becomes accustomed to the constant change of equilibrium. 5. On the first night out take some laxative pills, as, for example, two or three of the compound rhubarb pills. Most persons have a tendency to become constipated at sea, although diarrhæ occurs in a certain per centage. Constipation not only results from sea-sickness, but in turn aggravates it. The reason has already been given why cathartics should not be taken before starting. The effervescing lazatives, like the siedlitz, or the solution of the citrate of magnesia, taken in the morning on an empty stomach, are bad in sea-sickness. 6. After having become so far habituated to the sea as to be able to take your meals at the table and go on deck, never think of rising in the morning until you have eaten

something, as a plate of oatmeal porridge or a cup of coffee or tea, with some sea-biscuit or toast. 7. If subsequently, during the voyage, the sea should become unusually rough, go to bed before getting sick.—*Philadelphia Reporter.*

Wombless Women.

(The subjoined is an extract from an article entitled *Surgical Cases, Devon and Exeter Hospital,* found in the last volume of *St. Bartholemew's Reports:*)

That an incapacity for menstruation should consist with female health, is a strange fact. In two of the three following cases of wombless women, the defect was congenital.

Case 1.—About nine years since, I removed the womb by ligature. In the "Address in Surgery" of 1860, I gave this case very circumstantially. The main facts were, that the patient was twenty-one; that it was her first labor; that she was delivered while standing; that the midwife tugged at the naval string; that the womb was everted; and that she nearly bled to death on the spot. After many months, when she was nearly exhausted by recurring hemorrhage, I tied the womb with Gooch's canulæ.

As I was going into the operating room, the nurse, a worthy old woman and a favorite, said, "Please, sir, if you take out her womb, I suppose she can never have her courses again, and if so, what then?" I replied, "Nurse, if I do not take out her womb, she may die before night. If I can I will save her life now. That is my present thought. Icannot look beyond that."

After all manner of perils, she made a thorough recovery. Of course she has never menstruated since, but when I saw her, three years after, she was in good health and good spirits. I know that she was perfectly well several years after that. Her whole aspect is feminine, her complexion is fair and delicate, as it has always been, but in no wise chlorotic. She walks with her young man like any other servant girl; she cares nothing for the loss of her womb, which seems to have produced no other effect, moral or physical, than the cessation of her menses. That is the answer to the nurse's question, 'if so, what then?'

Case 2.—About four years ago, a very delicate young woman, aged twenty-five, evidently in declining health, came under my charge at the hospital. She told me that she had been left an orphan, (I believe one, at least, of her

parents had died of consumption), that she was delicate, and had not been able to retain her water like stronger girls; but that she had been brought up carefully; was now the mistress of a national school, and had married at twenty-three. She then added that coition had, from the first, been accompanied by pain, which, instead of diminishing, as she expected, had increased, until she could not bear it; and that her urine escaped from her involuntarily. She and her husband, who were reputed to be very worthy young people, and a most attached couple, were greatly distressed, as they well might be. I learnt then, also, that she had never menstruated,

Her prudenda were perfectly natural. About three inches up the vagina there was a sudden narrowing, like a stricture. Its circular edge was soft, and the orifice sufficiently open to admit the finger; but it could have been easily dilated to a greater extent. It exerted a gentle compression.

This was the sphincter, and beyond it was the bladder. There was no trace of a womb.

I told her that sexual intercourse must cease forever. She was much grieved on her husband's account; of whose regard for her she spoke with genuine feeling. I recommended tonics, and she went home.

I heard nothing of her until lately, when she and her husband called on the nurse. They appeared a fond couple still. Her health was restored; and the incontinence of urine not worse than when she was a child.

Case 3.—I was consulted in the case of a lady's maid, aged forty, who previous to the last six weeks, had enjoyed excellent health. She was a neat little figure, a brunette, must have been pretty, and was young looking for her age. She had a swollen knee, and flying rheumatic pains, for which she could not account, but she was chiefly harrassed by an irritable bladder. Micturition was frequent, scarcely to be restrained, and painful, both at the time and afterwards. She had used a hip-bath and opiate fomentations, with partial relief. I was to ascertain if a urethral wart or a calculus occasioned her distress.

Her urine had always been apt to escape when she coughed, but she had not been subject to leucorrhœa, and she never menstruated.

The external appearance of the genitals had nothing peculiar. The pubes and the labia were natural; the glands

of the clitoris and the nymphæ were fully developed; but I could not find the urethra.

The vagina was such as might be expected in a virgin, except that there was neither transverse rugæ, nor hymen, nor caranculæ, nor fossa navicularis. It opened abruptly, just in front of the perineum. It admitted the finger, which, when it had penetrated somewhat less than three inches, came upon a dimple. This yielded, circularly, on gentle pressure, and the finger entered the bladder. As it was withdrawn, the sphincter closed again. The bladder was not set on obliquely like a womb; but quite at the end of a canal, which was no vagina at all. It was simply a preternatural urethra applied, as in the male, against the rectum. There was not the slightest trace of an os uteri or cervix—neither could any womb or corresponding body be felt from the bowel.

She told me that, some years before, she had been engaged to a young man, who died. Spoke of him, as a woman should, tenderly and regretfully; but did not affect to represent her love for him as Platonic.

Judging from these cases, the menstrual discharge is not necessary to the health of a woman who has no womb. In the intervals between one pregnancy, or lactation, and another, it would appear that the presence of a womb has a special and accumulating influence on the constitution; and that it is thus the organ which, by its own periodical discharge, affords that relief to the whole frame, of which it has itself created the necessity.

It is the womb alone, and not the whole generative apparatus, or, indeed, any part of it. Looking at their personal appearance, their views, manners and habits, and their womanly, albeit their correct and estimable feeling toward the men they loved, I believe the subjects of the cases 2 and 3 to be real women—saving their wombs. If it be contended that their ovaries may likewise be wanting, I can only reply that in case 1 the generative system was undoubtedly complete, for that woman lost her womb, and nothing else, after bearing a child; and yet she is as healthy, without menstruation, as the two others, who never had a womb."— *Western Med. Jour.*

India-rubber Sponge.

This seems a very ingeniously contrived substance. It is an artificial sponge, made apparently by filling India-rubber

in a fluid state with bubbles of gas, and then allowing it to harden, the result being a mass of India-rubber as full of holes and pores as a French roll. It is very elastic, will take its fill of water easily, and may be used for many purposes, instead of stiff sponge—as, for instance, in the bath as a flesh-brush, for cleaning paint, windows, etc. But it also seems capable of being made into pads for fracture, hernia, etc., and if so, its lightness, pliability, and elasticity may make it of great service.—*Med. Times and Gazette.*

BOOKS RECEIVED.

PATHOLOGICAL PHENOMENA GENERALIZED, by H. Backus, Montevallo, Alabama.

The above is the title to a modest looking pamphlet of about sixty pages, in which the author attempts to reduce by induction, all pathological phenomena to the operation of one general law, and deduce them all from one common cause—congestion. The introduction, which comprises about one-fifth of the entire pamphlet, bears the evidence of an extensive acquaintance with the works of the later English metaphysical writers; and indeed, at its conclusion, the author very gracefully acknowledges his indebtedness to Lewis, Mill, and Combe; to the latter, however, he owes but little, and to none of them much, as the pupil is more logical than his masters—the imitator than the models. He modestly intimates an objection which has been urged, that he "an obscure and unlearned man, should hope to succeed with a subject where so many mighty intellects have failed." He "trusts that some of our readers will reserve this point until we have gone through with what we have to say, remembering that a 'cripple in the right way will beat a racer in the wrong.'"

As the author is unknown to us, we are not prepared to dispute his claims to the honors of obscurity, for in these days when notoriety is so frequently attained dishonorably, obscurity may not improbably be a criterion of merit. But unlearned he is not. Of this popular characteristic we would deprive him most decidedly, were it not for the fact that he has destroyed the validity of his title thereto by the display of a most extensive and comprehensive acquaintance with standard authors, both American and European, professional, and (apparently) philosophical. The author claims, that as all physical phenomena after having been successfully referred to Supernatural causes, Metaphysical Entities, and finally through the inductive method of Positive Science—the law of gravitation. So also, Pathological Phenomena having passed through identical phases, must eventually be reduced by the same method to the same cause. He claims farther, and justly too, for his

method the advantage, that it proceeds "with cultivated caution from the known to the unknown." He asserts that as we know nothing of vital forces we can predict nothing therefrom; "we cannot reach the unknown through the unknown." He claims for Pressure, which is resolvable into Gravitation, a predominant agency in the production of pathological phenomena, and refers to this cause both Hypertrophy and Dilatation of the heart, which, in their turn, become agents for propagation of the same condition in other organs.

While the author brings to the support of his theory, illustrations drawn from the effects of congestion upon the nervous system, more especially upon its great centres, he is silent as to the influence of the nervous system upon the circulatory in inducing or removing this condition. Having followed him step by step, and believing his propositions well framed and well sustained too, up to the limit of his conclusions, we must at this point express the opinion that he has stopped short of the ultimate fact to which a sufficiently broad generalization of pathological phenomena might have led him. He appears throughout his argument to isolate his field of observation and experiment too completely from its external relations, while asserting the desire to reduce pathological phenomena to the operation of physical forces he takes, we think, too partial and limited a view of their correlations. If his conclusion be admitted, which it must be, that the ultimate factor in *his* pathological induction, be congestion, the question arises, have we yet reached the utmost limit to which induction can lead us? If not, then comes the further question, what produces congestion? A link must here be supplied to connect this condition with external physical phenomena, and we apprehend that in the modification of the nervous system, both functional and structural, as induced by external agencies, physical or psychical, and reacting upon the circulatory system to facilitate or oppose congestion, his ultimate factor will be found the missing link, which shall prove the last one in the chain of phenomena extending from the operations of external influences to those complex pathological problems which puzzle the best of us so sadly.

We have read this essay with much pleasure and gratification, and commend it as the work of one who not satisfied to know things as they seem, desires that higher knowledge, the "*rerum cognitio per ultimas altissimasque rationes.*"* The essay, brief as it is, deserves a more extended notice than it is possible to accord to it within the narrow limits at our command, but we feel confident that to those who appreciate logical writing it will prove a benefit, and to those who do not, a benefit yet greater, as their need is greater.

We have received a copy of the Constitution and By-Laws of the Gynæcological Society, of Boston, an organization having for its object the study and advancement of the science whose name it bears. It is the intention of the founders to establish, by the appropriation of two-thirds of its receipts

---

* *Salvator Tongtorgi, Institutiones Philosophicæ. Romæ, 1862.*

thereto, a library of works, bearing upon their own specialty. Its officers are: Winslow Lewis, President; Horatio R. Storer, Secretary; George H. Bixley, Treasurer. We are glad to see this tendency to concentration of thought and effort upon the cultivation of special departments of medical science as manifested in the organization of this and kindred societies. It is especially through such agencies that sciences are to be advanced. We wish the Gynæcological Society of Boston all the success that the names of its founders assure for it.

Dr. J. M. Bigelow, of Detroit, sends us a treatise upon Svapnia, or purified Opium, for which he claims certain advantages over the crude drug or any of its ordinary preparations; such as uniformity of composition, and hence of therapeutic effect and freedom from some of the irritant effect upon the nervous system so frequently consecutive to the use of opium, and in many cases entirely contra-indicating the use of this "great boon to humanity." It is very desirable that the less commonly known alkaloids of this drug—Codeia, Thebaia and Narceia, should be made more accessible to the practioner than at present. The known therapeutic action of the latter principles especially rendering it a most desirable agent in the treatment of a large class of pathological conditions of the nervous centres to which the other alkaloids and the crude drug itself are entirely inapplicable.

ON THE IDENTITY OF THE WHITE CORPUSCLES OF THE BLOOD WITH THE SALIVARY PUS AND MUCOUS CORPUSCLES. By Joseph G. Richardson, M. D., formerly Resident Physician at the Pennsylvania Hospital.

Dr. Richardson, already quite well known to the profession as a Micrograph, presents in this paper his conclusions, summarized in the title, from observations made with a 1-25 objective (of Wales) upon these corpuscles and corroborating the conclusions of Cohnheim (first published in America in The Journal of Oct. 15, 1868), regarding the amaboid movements of the white corpuscles of the blood and their mode of exit through the walls of the vessels, claims priority in the discovery of their identity. The subject is full of interest, embracing a wide field for scientific investigation, and promising important data for practical deduction, and if the author's conclusions be not absolutely correct, they are, to say the least, deserving of critical examination by microscopic and physiological experts. It is by the aid of the microscope exercised in the field of histology, and by organic chemistry, that we must hope to unravel the more intricate physiological processes, without a correct appreciation of which we must be content to read the signs of disease as "through a glass darkly."

A HISTORY OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA, from its foundation in 1765, with Sketches of the Lives of Deceased Professors. By Joseph Carson, M. D., Prof. of Materia Medica and Pharmacy in the University of Pa.; Member of the American Philosophical Society, etc. Price $3.00. *Lindsay & Blakiston.* 1869. Philadelphia.

PENNSYLVANIA HOSPITAL REPORTS, Vol. 2., 1869. Price $5.00. *Lindsay & Blakiston.* Philadelphia.

TREATISE ON THE DISEASES OF THE EAR, including the Anatomy of the organ. By ANTON VON TROLSCH, M. D., Prof. in the University of Wurzburg, Bavaria. Translated and edited by D. B. St. JOHN ROOSA, M. A., M. D., Clinical Prof. of the Diseases of the Eye and Ear, in the University of New York, Surgeon to the Brooklyn Eye and Ear Hospital, formerly Surgeon to the New York Eye and Ear infirmary, etc. Second American from the Fourth German edition. Price $4.50. *Wm. Wood & Co.*, New York. 1869.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M. D., Curator to the Nursery and Child's Hospital, New York, Physician to the Infants' Hospital, Ward's Island, Professor in Bellevue Hospital Medical College, New York.

SYPHILIS AND LOCAL CONTAGIOUS DISORDERS. By BERKELEY HILL, M. D. London, F. R. C. S., Assistant Surgeon to University College Hospital; Teacher of the Use of Surgical Apparatus in University College, and Surgeon to Out Patients at the Lock Hospitals. *Henry C. Lea.* Philadelphia. 1869.

THE PART TAKEN BY NATURE AND TIME IN THE CURE OF DISEASES. A Dissertation for which a Prize was awarded to JAMES F. HIBBERD, M. D., by the Massachusetts Medical Society. 1868. Boston: *David Clapp & Son*, 334 Washington St. From the author.

Errata.

In Dr. Wallihan's article on Super-Oxygenation, commenced in the number for February 15th, page 117, instead of "late investigations," read "later investigations."

Page 119, for "permanently Nature's own," read "preeminently," etc.

Page 140, in the sentence "Sprague, of Boston," etc., insert "out" after "brought," and omit "polished;" and before "*Protoxide of nitrogen*" read "2" instead of "1".

Page 141, for "neutralizing" read "neutralize."

Page 143, insert "as" before "unfit," and read "experimenters" instead of "experimenter."

Page 145, for "attractive, antiseptic," etc., read "alterative, antiseptic," etc.

Page 146, for "varo gas" read "raw gas."

Page 148, for "usual complication" read "renal complication."

Page 150, Case 4, read "feeble pulse and weak digestion" instead of "feeble and weak digestion."

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—APRIL 1, 1869.—No. 7.

TRANSLATIONS.

Pathogenesis.

Are Typhus, Cholera, Plague, Yellow Fever, Dysentery, Intermittent Fevers and Hospital Gangrene due to Infusoria which perform the functions of ferments? Memoir read to the Academy of Sciences (Paris). By Doctor Jules Lemaire.

The history of these diseases ascends to the very cradle of Medicine. The numerous descriptions of them which have been transmitted to us, have taught us, I may even say, to render homage to the authors who have devoted themselves to their investigation, since they have described admirably the conditions under which these diseases originate, and all that clinical observation and pathological anatomy can teach.

But they left for solution two important points of their history, of which one is the consequence of the other. I refer to the nature of these diseases, and the rational treatment which should be applied to them.

In fact there can be discovered upon this subject, amongst

authors, only a series of hypotheses, accepted to-day by some, rejected to-morrow by others. A few physicians, recognizing the insufficiency of these theories, have preferred to acknowledge that the nature of these diseases was unknown to them. Finally, there are some who, like M. Roche, of the Academy of Medicine, have written: "The essence, or the intimate nature of diseases, is unknown to us. Object of useless researches, subject of ridiculous conjectures in all times, it escapes us, and will ever escape us. It would be idle to seek further to discover it. It is ever impenetrable." (*Lettres sur le cholèra.*)

This uncertainty appeared to me to be the cause of the diverse and unsatisfactory modes of treatment which have been recommended to combat them. Such was the state of science upon this point in 1860. Since this epoch I have published numerous investigations into the nature of ferments, of virus, of poisons, and of miasmata, which have for their principal aim the elucidation of this important point of general pathology, in order to establish the therapeutics of these diseases upon more certain bases. I have even condensed into the form of a proposition since 1862 (See Moniteur Scientifique du Docteur Quesneville, Octobre) my opinion upon this important question. (See my book upon Phenic Acid.)

To-day I shall have the honor to submit to the appreciation of the Academy the results of new investigations, which, associated with those that I have already communicated, appear to me to demonstrate that these diseases are the work of infusoria which play the part of ferments.

The title of my new work appears to me to indicate clearly my object. But the solution of this question is not so simple as it appears. It appears to me that the problem should be thus stated: *These diseases being given, to demonstrate in the media in which they originate, and in the organism, the existence of infusoria which play the part of ferments.*

To one who studies the subject with care, other embarrassing questions speedily present themselves, whose solu-

tion it is nevertheless important to give. These questions are the following:

1st. If these minute organisms originate these diseases, how is it that man and other animals have not disappeared from the face of the globe long since; since it has been demonstrated that these infusoria exist everywhere, in the air, in the water, in the earth, in our food, upon the body of man in health or disease, upon vegetables, etc., etc.

2d. Why, if they are due to microphytes and microzoa, do they disappear, since these little beings reproduce themselves and multiply in incalculable proportions. Does it not seem that their work would only terminate after the destruction of the human species and of other animals?

3d. Why does it happen in an endemic or epidemic, that many individuals are not attacked?

4th. Can the alteratives of the solids and liquids which are observed in these diseases be attributed to them?

5th. Are the phenomena thus presented due to microphytes or microzoa?

6th. Is each one of these diseases due to a special microphyte or microzon, or are they indeed the result of the action of several?

It must not be misunderstood that these constitute a portion of the problem. In spite of the difficulties which they present, I shall treat them successively in the course of this work. I shall commence by making an inventory of the facts already acquired in the history of these diseases. By classifying and criticising them, and by adding thereto my own observations I hope to throw the clearest light upon this question.

I shall first discuss a point which seems to me important, viz.: Do these diseases form distinct species?

The appellations which have been assigned to them are based upon their dominant symptoms. They appear to me to have no scientific value. If it is attempted to solve the problem which I have just proposed, I think it will be necessary to take into consideration these different appellations,

because, in describing these diseases as of distinct species, it seems that science has been rather embarrassed than aided. Proposing to remove the subject from the abstract to the concrete, as my illustrious master, M. Chevreul would say, I cannot accept, as characteristic of these diseases, names based upon a symptom, because this symptom may, perhaps, be produced by very different causes, Moreover, they may all be found associated in a single one of these diseases. All, as we shall see, originate from a common cause, and have common characteristics. This is my reason for insisting upon this point.

It is sufficient to consult the nomenclature of these diseases to conclude that a large number of authors have not accepted the designations which we are now considering.

In the midst of this confusion of names, and of opinions which have originated them, there will be found landmarks planted by the princes of science, which seem to me, to indicate the path leading to the demonstration of the unity of species of these diseases.

Hippocrates, whose teachings have been religiously followed up to the end of the last century, does not separate the plague from pestilential fevers. Under these denominations a great number of authors have described the fever of prisons, of ambulances, of ships, of camps (described at our epoch under the name of typhus and of typhoid fevers). Cholera has been, likewise, described under the name plague.

Galen, perceiving that in these diseases the blood becomes putrid, designated them under the name, putrid fever. The opinions of Galen reigned supreme up to the end of the last century, an epoch at which science, like empires, experienced a violent shock.

The plague of Egypt is described by Hoffmann, Swèdiaur, Vogel and others, under the name typhus.

Yellow fever is called by Sauvages typhus icterodes; and typhus miasmatic, ataxic, putrid and yellow by M. Bailly. Others have called it also putrid or malignant fever, like

that of prisons, ambulances, etc., already referred to. Cholera has been termed by several authors, and very recently again by M. Pellarin, Indian typhus.

A great number of physicians since Galen admit a choleraic intermittent fever, and cholera has been considered as a pernicious intermittent fever.

Cullen, whose authority is so great, says that yellow fever, intermittent, malignant and putrid, bilious, mesenteric and catarrhal fevers should not be separated from typhus, of which they are merely varieties.

We find in this rapid analysis an important indication: it is the tendency of eminent men towards unity of species of these diseases.

If we interrogate history still further upon this subject, we find facts of still greater importance.

Since the time of Hippocrates, physicians and veterinarians have observed that wherever matter in a state of putrefactive fermentation exists in great abundance, or wherever there may be large collections of men or of animals in health, either within restricted limits, or in the open air as in camps, serious diseases, transmissible, according to some, non-transmisible, according to others, originate.

For Example: Cholera is endemic upon the borders of the Ganges, which constitutes the place of sepulture of the Hindus.

Yellow fever originates upon the borders of marshes, principally at the mouths of rivers where putrescent matters are massed in considerable quantity. Plague is endemic in Egypt, which is covered with marshes. It is especially upon that portion of the population which lives in profound misery, in common with domestic animals, in habitations where filth of all sorts accumulates, that this disease rages.

Intermittent fever, dysentery, the cachexia or rot of sheep, which rages also amongst bovine cattle, originate wherever stagnant water containing putrescent matter exists.

Accidental foci of putrid fermentation, constituted of accumulations of dead bodies of men or of animals, as, after great battles or epizootics, have likewise originated in every age, grave maladies, which have been described under the name of plague, pestilential fever, malignant, putrid or typhus fever, and of hospital gangrene.

My experiments upon the nature of miasmata furnished by the human body in health, which engender the diseases already referred to, demonstrate that they originate also from matters in the state of putrid fermentation.

It cannot be ignored that there is for all these diseases a common origin: the emanations from matters in the state of putrid fermentation. If I now analyze and compare the lesions and the symptoms which are observed in these diseases, it will be easy for me to prove that this common cause produces common effects; for example: the buboes, the carbuncles, the petechiæ, the gangrene, the gastro-intestinal symptoms, and others which are observed in individuals subjects of plague, exist in hospital typhus, in severe typhoid fever, in yellow fever and in the dysentery of hot climates. This dysentery often follows intermittent fever, or even complicates it, or is terminated by it.

Hippocrates, Torti, Willis, Morton, Monget, Sauvages, Morgagni, and physicians of our epoch admit a choleraic intermittent fever, and as has been already stated, cholera has been considered a pernicious intermittent fever.

In cholera, after the first symptoms, a very decided typhoid condition has been frequently determined.

The intermittent fevers of Africa are frequently initiated by a general chill of the body, which persists until death;* under the name of algid fever. These fevers are accompanied by vomiting, diarrhœa, epigastric uneasiness, dyspnea as in cholera. In yellow fever the urinary secretion is suppressed as in cholera.

---

* This frequently occurs in the intermittents of the extreme Southern States of this country. *Teste meipsuro.* TRANSLATOR.

Excellent physicians have collected numerous observations to demonstrate that intermittent fever may be transmitted from one individual to another.

I might cite still other common characteristics which are observed in all these diseases. I have selected the most important in order to fix the attention more firmly.

This comparison appeared to me of the highest importance, because it demonstrates, in the diseases described as of distinct species, the existence of a great number of common symptoms, of identical lesions or alterations.

Physicians who have studied with care the history of diseases know that certain symptoms may induce variations in the morbid species, but cannot change it.

All these facts borrowed from the history of these diseases inflict a heavy blow upon the edifice of the past. They seem to me to indicate the necessity for a reformation of the nomenclature of these diseases. I shall produce others which seem to me to establish their identity in nature, and which permit me to hope that soon they will be ranged in the great class of parasitic diseases.

Numerous cases of poisoning have been occasioned by putrescent food. Lesions and symptoms analogous to those which occur in the diseases now under consideration, have been observed. Physicians know that the internal use of marsh water produces the same effects of acute or slow intoxication, as the absorption of their emanations by the respiratory surface.

According to M. Roche, of the Academy of Medicine, intermittent fever has been produced by introducing into animals the vapor of water condensed over marshes.

Numerous experiments have been made upon animals with putrescent matters. Some have been caused to inspire their emanations; in others they have been introduced into the stomach or into the rectum, or by subcutaneous inoculation, or injected into the veins. In these different experiments the results have been the same. Grave symptoms or death have been the consequence. Thus, when men or

animals introduce into their organisms, by the modes just mentioned, putrescent matters, the same effects are observed.

The experiments which I published long ago, explain, and seem to me to demonstrate the cause of the identity of these results.

In fact, I have proved that the gases and vapors which are disengaged from all putrescent matters carry with them in considerable quantities the reproductive bodies of microphytes and of microzoa which immediately provoke fermentation in fresh animal or vegetable substances. Now the tenuity of these bodies permits them, not only to remain in suspension in the atmosphere, but even to penetrate into the organism through the respiratory ducts. By the inoculation, by the injection, or by the introduction of these matters into the digestive tube, both the reproductive bodies and infusoria in the adult state are caused to penetrate.

If these little beings occasion these diseases, they ought to be discovered in the organisms of the individuals attacked by them. This fact is now incontestable. Bacteria and vibriones exist in the circulating blood of typhic and variolous subjects; in the disease termed ———————— in anthrax, in moist gangrene, and in malignant pustule. These same animalculi, as also monads and cerco-monads, exist, likewise, in the dejections of typhic, choleraic and dysenteric subjects. Many observers, as well as I, myself, have determined this. The discovery of these infusoria in all these pathological cases, appears to me to possess immense importance, since, in the normal state they do not exist in the organism, as will be seen hereafter.

I have made experiments upon myself in a state of health, with a view to ascertain if an exclusively animal or vegetable regimen favored or opposed their development in the residua of digestion. These experiments which gave me negative results, have assumed subsequently for me real importance.

Having been violently attacked, some months later, by

cholera, I made of it a new study, which enabled me to compare the results. Eight days after the commencement of the attack I could scarcely keep myself upright; I examined not only the fæces, but also all the products of the secretion and of respiration. Neither the watery vapor of respiration collected with the precautions I have recommended, nor the nasal mucus, nor the urine, contained infusoria. But I discovered in the fæces myriads of bacteria termo, and vibriones, liniear, angular and catenary.

Some of these last have seven rings. I also found spirilli volutantes, little monads and circomonata crassicaudæ. This observation compared with the first appeared to me of the highest importance, and what gave it still more significance, was the fact that two months after my recovery, examining anew these matters with the microscope, I no longer found infusoria. Their presence, therefore, was certainly due to cholera. Having perspired freely, I recognized in the matters collected upon the different portions of she skin, spores analogous to those which I described in my memoir upon the nature of miasmata, and a considerable quantity of bacteria and little vibriones. Having been compelled to neglect during eight days the care of my mouth, I found in abundance bacteria, linear vibriones, spirilli and monads. Finally, removing a flannel waistcoat which I had worn four days, I caused it, still moist and warm to be washed in a small quantity of distilled water. I immediately examined this liquid with the microscope. I discovered in it, in abundance, the same species of infusoria as those whose existence upon the skin I had already determined.

The experiment, which demonstrates the presence of infusoria in the clothing, explains how these, and also bedclothing, have so often propagated these diseases. This is not all: blood collected during life from man and from animals suffering from typhus or variola, and containing bacteria and vibriones has been inoculated, or injected into the veins of dogs, of sheep and of rabbits in perfect health.

The bacteria and the vibriones would reproduce and multiply themselves, determining formidable symptoms, and almost always death. MM. Cose, and Feltz, who have experimented, have succeeded in reproducing in rabbits ten successive generations of bacteria, as M. Virchow has done with trichinæ. They ascertained that the more these generations are repeated the more active they become, which is demonstrated by the more prompt rapidity of the accidents which they occasion. I published some experiments which established that bacteria desiccated return rapidly to life when they are bathed in water at 25° centigrade. MM. Cose and Feltz have established the same fact upon blood containing these animalculæ which they had desiccated. This blood inoculated, in the dry state, into rabbits, did not induce death, whilst, when previously moistened and inoculated in the same proportions in other rabbits, death was the speedy consequence. I shall hereafter refer to this fact.

What gives great importance to the experiments of the learned professors of the Faculty of Medicine, Strasbourg, is the fact that they corrected them by comparative experiments made with normal blood. These last demonstrate that a considerable quantity of blood taken from a healthy man may be injected under the skin of rabbits without inducing augmentation of temperature, nor disturbance.

Before concluding this first treatise, I will recall the discussion which I established—formerly in order to prove that the causes of transmissible maladies could not be attributed to chemical agents nor to poisons, nor to dead matters; because neither can reproduce and multiply itself, whilst the essential characteristic of the diseases which we are considering is to reproduce and multiply itself in proportions sometimes considerable. Now if, as I have done long since, one should kill these infusoria either with coal tar or its compounds, or with other substances, not only is the fermentation arrested, but at the same time moreover, these matters already profoundly altered, are deprived of their power to induce it elsewhere, either by their exhala-

lions, by contact, or by inoculations. From being dangerous as they were, they become, after the death of the infusoria, entirely inoffensive. Making applications of these facts to the therapeutics of authrax, of moist gangrene of malignant pustule (charbon) of typhus fever, of dysentery, of cholera, of tinea, of the itch, of dissecting wounds (of which last one was received in opening a horse dead of glanders), remarkable results have been obtained, (*V de l'acide phinique.*) All the facts which I have just related in this sketch are linked together. They appeared to me of the highest importance for the solution of this question. With these little beings, all the most difficult points which the history of these diseases presents can be scientifically resolved, as I hope to demonstrate in the sequence to this work.

CORRESPONDENCE.

The Waukesha Medicinal Spring.

EDITOR CHICAGO MEDICAL JOURNAL:

Allow me to communicate what I know personally regarding the Medicinal Spring recently discovered by accident at Waukesha, as I think it will be of peculiar interest to your readers.

The following is the way in which the spring was discovered: Col. Dunbar, a wealthy citizen of New York, being on a visit to his sister-in-law, in Waukesha, was walking in the outskirts of the village, one day, in company with some friends. He had been laboring under *diabetes saccharum* for some fifteen months previous, and had availed himself of the best medical skill in both Europe and America without obtaining any relief. He drank several gallons of

water daily, and passed about an equal quantity, being obliged to frequently rise during the night. His water was repeatedly tested by Dr. Parker, in New York, and found loaded with sugar, and where it dribbled away, it stiffened his clothing so that the cloth would break like pasteboard. His thirst was constant and intense, so much so that he was in the habit of carrying a bottle of water in his pocket, to quench it. He was much reduced in flesh and strength, had a very bad color, and his gums had the appearance of those of a person salivated. On the occasion referred to he became so parched with thirst that he could scarcely speak. His friends said: "By the way, there is a spring near by; we'll get a glass and go down there and let you drink." This they did. The Colonel felt a peculiar relief immediately—unlike that afforded by common water. I should remark that this spring had been known to the villagers for thirty years; the boys often used to catch "minnies" out of it for fish-bait, but no one ever suspected that it contained medicinal virtues.

After lying awhile under the shade of an oak tree which stands near the spring, the Col. went back and drank freely of the water again. He then went home perspiring freely.

Strange to say that from the first taste of the water his symptoms began to abate. He felt so much relieved next morning that he visited the spring early, and drank freely again, and continued to do so, until he recovered entirely. Within twenty-fours, the fierce thirst had left him, and he was no longer obliged to rise during the night. Believing his cure permanent, the Col. returned to his old mode of high living, wine, etc., and his complaint returned. He again had recourse to the water, by the advice of Dr. Parker, and was again cured within twenty-four hours. This winter, being in Washington, and living high, it returned a third time, and he again wrote Dr. Parker. The Doctor's prescription was, "Drink the water again." A few weeks since, the Col. arrived in Waukesha to follow this advice, and, as before, received immediate relief. He

has gained five pounds in flesh, and looks as well as any man I ever saw, and has not a particle of his old trouble. I know Col. Dunbar personally, and write of what I know. He is a man weighing 235 pounds, stout and fleshy. On a healthy person, the water is, I judge from my own experience, decidedly diuretic; but those who have used it for diabetes, with great unanimity, declare that "the more they drink the less they urinate," it seeming to have an astringent effect on the kidneys.

The spring itself bubbles up under a hillside, among sand and limestone rock. The water is as clear as air, and tastes like pure spring water—has no other perceptible taste—but is so impregnated with salts of some kind that the pond into which the rivulet from the spring empties itself, which is about seventy-five feet in circumference, *never freezes* during the coldest weather, although fully exposed and unsheltered. The spring water is about 50° or 60° Fahr.—being that of ordinary well water. I have visited the spring, and noticed several small fish in it. The water is pleasant to use, and is used for table and drinking purposes entirely by Miss Clark (the Colonel's sister-in-law) and her family. It is the middle and largest one of three springs, within thirty feet of each other, all, apparently, having the same origin, and are probably of similar properties, although the water of the other two have never been tried. If there is any iron in the water, it must be the merest trace, as it presents none of the characteristics of the chalybeates.

If drank freely before breakfast, the water is mildly aperient, and is said to be one of the finest regulators of the bowels ever tried, and a sovereign remedy for habitual costiveness. Some who have used it complain of its causing vomiting. I have drank as much as a quart of it within an hour, without noticing any special effect, except a sharpening of the appetite. An analysis, I understand, has been made of it, for Dr. Parker, but I have not seen it. When

boiled down, it leaves a thick, syrupy substance at the bottom of the cauldron.

It has performed three other cures, all of whom I have seen and conversed with, scarcely less remarkable. The Colonel's sister-in-law had labored for years under a distressing "*gravel.*" The water has affected a complete cure of this difficulty in her case. Mr. J. J. Clark had the appearance of a person with confirmed tuberculosis. It was generally conceded that he would not live three months, as his sister had died of the same disease. He was induced to drink the water, although he had no faith in its efficacy. The result was most marvelous. The cough left him, his appetite, digestion, and spirits returned; he fleshed up, all his pants "got too small for him," and, to-day, a more healthy looking man I never saw, and he has no cough, and says he feels as well as he ever did in his life.

The last day I was at the spring, Mr. Kimball, an old and respected citizen, living near the village, and who, like most old men, being troubled with his water-works for years—his trouble being similar to Col. Dunbar's, so far as symptoms went, although whether the urine was saccharine or not I do not know—drank of the water, obtained speedy relief, and is now entirely free of the difficulty. He was, in fact, jumping around, expressing his satisfaction and sense of relief in the most lively manner.

Here, then, are at least four remarkable and well-authenticated cures, all the parties being residents of the place, and their cases well known to all the citizens, and they are all ready and eager to tell how they were cured. There must certainly be some wonderful virtue in the water; and if it should prove as beneficial in all cases of *diabetes* alone, as it has in Col. Dunbar's and Mr. Kimball's, it will be a boon to suffering humanity, the value of which cannot be overestimated, for this disease has, heretofore, baffled all known remedies. But what shall we say of it if it should prove equally beneficial in all derangements of the kidneys, rheumatic and gouty complaints? And what a tide of pil

grims from every part of the world will seek the healing pool if all cases of tuberculosis similar to Mr. Clark's should be cured by its use?

At present the spring is free to all, and, perhaps, always will remain so; the Colonel and his sister-in-law, who have purchased the ground, being persons of enlarged and liberal views on such matters. The supply of water is inexhaustible, and all who will, may drink freely, without money and without price. All that is needed is a good hotel to accommodate those visiting the waters—and this the Colonel assures me he intends to erect the coming summer.

The water deserves a thorough analysis, and is now being tried by Dr. Parker, of New York, in the hospital under his charge; and also by a number of parties—invalids—on the ground. F. W. Williams, M.D.

March 16th, 1869.

J. Adams Allen, M.D.:

Dear Sir: Enclosed find balance for the Journal as per bill. If it is not presuming too much upon your good nature, I would like to mention a remarkable cure of epilepsy which occurred in the limits of my practice. The patient, a girl of nineteen years, had been afflicted from childhood with epilepsy, the paroxysms recurring every two or three weeks, and continuing from six to fifteen hours each time, until the intellect was almost destroyed. About ten months ago she became pregnant, and the paroxysms became less frequent, and at the end of two months entirely cured. I attended her during confinement, and, contrary to my expectations, there was no appearance of convulsions during, or following, labor; nor has there been any symptoms of them since. Is the man who effected the cure a "Quack" or a "Regular?"

ORIGINAL COMMUNICATIONS.

Tubercular Kidneys.

Dec. 5, 1864.—E. K———, female, aged about thirty-five years. Much emaciated and prostrated; vomiting ingesta persistently. Complains of severe pain over the left kidney; tongue slightly reddened, pulse and skin nearly normal. *No cough*; bowels obstinately constipated. No satisfactory history of the case can be acquired. Directed a blister to be applied over the left lumbar region, and the urine to be reserved for examination.

Dec. 6th.—Renal pain greatly relieved. Urine nearly neutral (very faintly acid). Specific gravity 1025 (at 65° Fr.). No perceptible change was produced by any chemical reagent, except the deposit of a brown, flocculent precipitate, upon boiling it after the addition of nearly an equal bulk of liquor potassæ. Under the microscope a small quantity of finely granular matter was visible, intermingled with a very few cells obscurely resembling pus cells.

The renal pain, as stated, was diminished, but the gastric uneasiness and tenderness appeared to have increased.

Ordered one-fourth of a grain of calomel every three hours! which, producing no amelioration of her condition, after the lapse of forty-eight hours, was discontinued. She was then confined exclusively to milk, of which about two ounces were administered hourly. This was, like every thing else, rejected by the stomach, and the patient sank, apparently from inanition, on the 12th (seven days). *The secretion of urine amounted to about one quart daily*, maintaining its characteristics as already described. The bowels were obstinately constipated.

Sectio cadaveris eight hours after death. *Head*, not examined. *Body*, emaciated to an extreme degree; subcutaneous

layer of fat of a deep orange color. *Chest*, pleural surfaces adherent throughout their whole extent; right lung emphysematous, left lung collapsed. *Structure, normal.* Heart, pericardium containing about one ounce of serum; right ventricular and auricular walls fatty throughout about one-third of their thickness.

A firm, white, old fibrinous clot, one and one-half inches in length by half an inch in thickness, in right ventricle. Left ventricle concentrically hypertrophied; walls about one and a quarter inches in thickness; valves normal.

Liver much engorged with venous blood, but otherwise apparently healthy. Gall-bladder distended with bile. Spleen enlarged, engorged with blood, but otherwise apparently healthy, except upon its anterior face, which had undergone complete cartilaginous degeneration for the space of four inches in length, two in breadth, and one-sixth of an inch in thickness. Right kidney reduced to little more than half its normal size, lobulated externally, and of a deep purple color, its interior converted entirely into tubercular matter, except the pelvis, which was occupied by a mass of fat. Left kidney enlarged to twice its normal size, of a deep purple color externally, occupied internally, wholly by vomicæ, enclosed by dense, tough tissue, varying in size from that of a pin's head to that of a hen's egg, stuffed with tubercular matter. The lower extremity, for the space of two inches in breadth by half an inch in depth, was healthy, constituting the whole of the secreting structure remaining in either organ.

The mucous membrane of the stomach and intestinal canal throughout was congested, but otherwise healthy, the intestines being in many places adherent from old circumscribed peritonitis.

The above reported case may possibly interest the readers of THE JOURNAL, from its rarity, and from the absence of objective symptoms of sufficient pathognomic value to serve as a basis for a diagnosis.

The striking peculiarities are:

1st.—The existence of large masses of tubercle entirely isolated, limited exclusively to one organ, or system.

2d.—The maintenance of the functional energy of the kidney to a degree approximating so nearly to the normal standard; so small a portion of its structure remaining intact, involving,

3d.—The absence of constitutional indications (aside from the gastric irritation, if that could be so considered) of retention of the elements of the urinary secretion in the blood.

4th.—The absence, from the urinary secretion itself, of any sufficient indications of the true condition of the secreting organs. Having had many opportunities of examining tubercular sputa, and also urinary deposits, with the microscope, the existence, in this case, of tubercular matter in the urine in appreciable quantity would surely have been recognized.

An accurate diagnosis, in this instance, could possess only a scientific value, having no practical significance whatever, and yet the physician can be placed in few more embarrassing positions than to find himself utterly unable to determine the true pathological condition of his patient.

EDITORIAL.

"There's cheating in all trades but ours," says the old adage. Recent developments, however, would make it appear that we, like some others, have been reposing serenely under the consolations of the maxim, until its applicability has become a matter of tradition rather than of justice. The statements made by Mr. E. H. Sargent, President of the Chicago College of Pharmacy, at the late annual meeting of that body, with reference to the frauds

practiced in the drug trade, demand attention from the whole profession who are, perhaps, more immediately interested in the subject than the pharmacists to whom the remarks were directed.

Coming from such a source these statements must be considered authoritative and reliable, and the grievances which they set forth call loudly for reform. If the advocates of *protection* are so very anxious for the *protection of the public* as they claim to be, let them direct their efforts in this direction, in which the prospect of attaining their object is more promising. Let them induce the Legislature to pass an act (and provide for its enforcement also) to punish with the utmost severity these indirect murderers, who jeopardize and destroy human life for the sake of money.

The vender of "Benzine whisky" is far less culpable than these; he merely offers the option to others to poison themselves; they poison the innocent and unsuspecting.

In the number of The Journal of February 15, 1868, we were so fortunate as to be able to present to our readers a verbatim report of the experiments of Dr. Jules Lemaire, as presented by him to the Academy of Sciences, Paris. We have been still further fortunate in securing a report of Dr. L.'s conclusions from his observations, which we give entire, in the present number.

Dr. J. Hughes Bennett, of Edinburgh, should be heard on the other side of the subject. In a pamphlet reprinted from the *Edinburgh Medical Journal*, for March, 1868, Dr. B. not only denies the justice of Lemaire's conclusions, but also completely demolishes the cell theory. So far as the atmospheric Germ Theory bears upon the question of the origin and propagation of disease, its solution is certainly of practical importance to medical men, and deserves still further investigation as, notwithstanding the labor expended upon the question, it is *adhuc sub judice*.

OBITUARY.

GRISOLLE.—After three years of suffering, in consequence of an attack of apoplexy, this distinguished physician died on the 10th of February, in the fifty-eighth year of his age. He was borne to his last resting-place by his fellow-members of the Faculty of Medicine, Paris.

Death of Dr. A. A. Dunn.

At a regular meeting of the Chicago Medical Society, held on Friday evening, the 12th inst., the following report was adopted:

The undersigned committee to whom was referred the duty of expressing the sentiments of this society regarding the late A. A. Dunn, M.D., of this city, would respectfully report:

Resolved, That Dr. Dunn, by his natural intellectual endownents, his education, his professional skill and integrity, his ardent support of medical societies and ethics, had won the esteem and confidence of all the members of the profession who knew him; while the addition of a uniform Christian deportment, and a self-sacrificing patriotism, had added equally the respect and warm attachment of all classes of community.

Resolved, That by his death, the profession and society have lost one of their most respected and useful members, the nation one of its true heroes and defenders, and this society one we all esteemed as a brother.

Resolved, That a copy of the foregoing expressions of sentiment be communicated to the family of the deceased, and to the medical journals and daily papers of this city.

N. S. DAVIS,
T. D. FITCH,
A. GROESBECK, } *Committee.*

FOREIGN ITEMS.

Medical Education in Spain.

The provisional government of Spain has decreed *absolute liberty of education.* Any Spaniard may found educational establishments, and open public courses of instruction of any kind whatsoever, without being obliged to submit the programme of leçons, to the minister, or to any representative of authority.

This innovation in established usage appears to be viewed differently by the two most prominent representatives of the medical press in Spain, *El Genio Medico-Quirurgico* and *El Siglo Medico*, which, by their antithetical attitudes, to quote the accomplished Redacteur-en-chef of the *Gazette Médicale* of Paris, "suggests the two philosophers of antiquity, Democritus and Heraclitus; the first-named journal recognizing in the new order of affairs only cause for joy, while the second groans over the inconsiderate enthusiasm of its cotemporary."

In Italy the attention of the profession is, just now, especially directed to the subject of malaria, of which there are such numerous sources beyond the Alps.

The *Gazette Médicale* of Turin expresses much astonishment that the rice fields should be permitted to be maintained. The danger to human health and life arising from the culture of rice has been indicated from time immemorial by hygienists and philanthropists; the medical press, special publications, sanitary and civil councils, medical and scientific societies and associations have, always and everywhere, insisted upon the pernicious effects of the emanations from inundated rice-fields. The peasants who labor, during a portion of the year, in these localities, by their cachectic appearance, their etiolated complexions, the engorgement

of their abdominal organs, and the brevity of their lives, demonstrate most eloquently the deadly influences to which they are subjected.

The same authority estimates that the culture of sixteen hectolitres (3,200 lbs.) of rice costs a human life, and demands that the government shall disregard the pecuniary interests of proprietors, and suppress, by law, a branch of industry in which public health is sacrificed to private gain. It calls upon Italy to imitate the example of Portugal, which has prohibited rice-culture, to the great benefit of public health.—*Gazette Médicale, Paris.*

The *Gazette Médicale* of Venice calls the attention of the authorities to the dishonest and criminal practices of confectioners in adulterating their wares. Its remarks are suggested by the poisoning of a family consisting of a lady, child and servant, by eating nougat, which was proved by chemical analysis to have been colored with arsenite of copper (Scheeles green). The same coloring matter was detected in other articles in the same shop. The municipal authorities caused a placard designating the offence to be affixed to the establishment in question, and at the same time prohibited, under heavy penalties, the sale of any goods, manufactured at the establishment, already in the market.—*Gazette Médicale, Paris.*

Note.—It seems useless to warn our own citizens against the deletereous character of the confectionery so largely consumed throughout the West. If any one will take one of the common motto-wafers or kisses, and attempt to dissolve it in a glass of clear water, he will have an occular demonstration, more convincing than a chemical analysis, of their utter unfitness for food.

Les Annales de Médicine of Florence reports four cases of tænia originating from the use of raw meat, and quotes M. Weisse (of St. Petersburg), who, amongst the first to use raw meat in the treatment of the diarrhœa of infants, observed that many of his little patients contracted tænia solium; and this result follows as well the use of beef as of pork. The frequency of tænia amongst Abysinnians is

attributed, by nearly every traveler who has written of that country, to the custom of eating raw meat, by the natives.

The translator has recently expelled a tænia solium from a patient, in this city, who had eaten no pork, but freely of raw beef. W. H.

The writer further suggests the importance of observing carefully the effects of fish diet, in originating entozoa, in countries where it constitutes the staple article of food, attributing to trout and the salmon the origin of the bothriocephalus.—*Ibid.*

Germany.

Appropos of entozoa, Dr. Flamon has reported to the Medical Society of Vienna the outbreak of another epidemic of trichinosis at Shöenbeck (Germany), "that classic land of the trichina." It is asserted that this disease is no longer accidental, but has become actually endemic on the further side of the Rhine.—*Ibid.*

Colloid of the Brain.

M. Magnan presented, recently, to the Biological Society of Paris, preparations of colloid substance observed upon the surface of the brain of a patient who had yielded gradually to the progress of general paralysis. The colloid substance was located in the gray substance of the convolutions of the frontal and speroidal lobes. It was opaline in color, and depressed the cerebral substance. It appeared in the form of small islets. Examined with the microscope, there were observed in it concentric disks of a brilliant opaline matter, studded with shining nuclei, and in the middle of the central disk, a capillary vessel with thickened walls was perceived. The nervous substance itself was altered in the same manner as the connective tissue; that is to say, it was shining like the nuclei. By comparative examinations of several preparations M. Magnan has been led to think that the histological changes commenced in the nuclei, and invaded secondarily the nervous cells.

Treated with tincture of iodine and ether, these prepara-

tions preserved their primitive aspect. The alterations were, therefore, due neither to fat nor to starchy matter. —*Ibid.*

M. Dumontpallier called the attention of the Biological Society to the frequency of permanent congestions of the ears of the insane, and especially of the subjects of general paralysis. No physician can traverse the corriders or dormitories of insane asylums without being struck with the appearance of this congestion of the ears, which has, moreover, a direct relation to congestion of the cerebral membranes.—*Ibid.*

Upon the Mode of Action of a Group of Poisons.

BY L. HERMAN, FROM LA GAZETTE MÉDICALE, AND THE ARCHIV. FUR ANATOMIE, PHYSIOLOGIE UND WISSENSCHAFTLICHE MEDICIN.

The author has studied the group of anæsthetics of which ether and chloroform are the best known; but this group comprises many other bodies, amylene, clorethyl, and its derivative chlorides; acetic ether, and many other combinations; the ethylic, methylic and amylic alcohols; and lastly three gases, protoxyd of nitrogen, chloride of methyl and ethylene.

All these bodies have, in his opinion, the common property of dissolving the sanguineous globules in the plasma, as Böttcher and Von Wittich have demonstrated for ether and chloroform.

With reference to volatile substances there is no doubt of it, but as to gases, it has not been demonstrated, except of chloride of methyl.

How do these substances act upon the nervous system? Does the destruction of the globules act upon the nervous system, either through the medium of the respiration, deranged in its principal condition, the introduction of

oxygen, or by the action of the hæmato-globuline set free. But this is not probable, for several reasons.

1st.—There may be intense anæsthesia without extensive destruction of globules. For the destruction of globules of the blood in circulation there is a very sensitive test, the presence of biliary coloring matter in the urine; now icterus although common in "*chloroformization*" is far from being a constant phenomenon.

2d—The respiration cannot be the cause of the phenomena observed, first, because they are not dyspnœic in their nature, and next because anæsthetics act upon the frog, an animal almost insensible to respiratory lesions.

3d.—Free hæmato-globuline cannot be the cause of these phenomena, for anæsthetics act upon invertebrata with absolutely colorless blood, as well as upon red-blooded vertebrata.

According to M. Herman there exists in the nerve-substance and in the blood corpuscles an identical matter, *protagon*, upon which anæsthetics act.

Liebreich has demonstrated the existence of protagon in the brain, and L. Hermann has demonstrated it in the globules. This matter is dissolved by the anæsthetics, sufficient quantities of which may be received into the blood. The gaseous anæsthetics, on the contrary, and especially the chloride of methyl, are not dissolved in sufficiently large quantities in the blood, and hence only cause the blood globules to swell, without effecting their solution. As to the two other gases, they are dissolved too scantily in the blood to permit the detection of any appreciable action upon the red-globules.

This interpretation leaves a desideratum. How does it happen that bodies, without appreciable action upon the *protagon* of the globules, cannot act upon the protagon of the nervous substance with sufficient effect to produce the phenomena of anæsthesia?

The author explains it by the delicacy of the material processes of the cerebral substance, an explanation which, he admits, leaves still a desideratum.

It is asked, next, if *all* bodies dissolving the sanguineous globules might not have likewise this action upon the nervous centres, and in investigating, in this point of view, the biliary acids, he has seen his supposition confirmed. He cites in illustration the nervous phenomena of severe icterus.

M. Hermann concludes his memoir by an appendix, in which he gives the process of extracting the *protagon* of the blood and indicates its characteristics.

Animal Heat.

BY TSCHESCHICHIN.

The investigations of the author have been made upon rabbits in the laboratory of Dubois-Reymond. He arrives at the following conclusions:

1st.—The spinal cord, containing the circulatory and respiratory centers, acts mediately upon the organic chemical processes, and consequently upon animal heat.

2d.—Section of the spinal-cord results in retardation of the circulation, which induces repletion of the veins by the blood, and in consequence of this, radiation increases, and the general temperature diminishes.

3d.—If the body of the animal be enveloped in bad conductors of heat, the loss of caloric from the surface of the body is diminished; the diminution of temperature may then be diminished or prevented at will; and inversely, the colder the medium in which the animal is placed after the section of the cord, the more rapidly it becomes cold.

4th.—Since the augmentation of the radiation of superficial caloric is due to paralysis of the vessels, and to their repletion with blood, all measures which remove this paralysis retard the radiation and the loss of heat.

5th.—The causes which induce paralysis of the vessels act upon the radiation of caloric, as does section of the spinal cord.

6th.—The cramps, which are produced after the ingestion of certain poisons increase the internal temperature of the bodies of animsls.

7th.—In poisoning by alcohol the general temperature commences to sink immediately after the poisoning.

8th.—Section of the great sympathetic has, upon the general temperature, the same effect as section of the spinal cord.

9th.—Section of the pneumogastric has no appreciable direct influence upon the changes of animal temperature.

10th.—Section of the medulla oblongata at its point of union with the pons-varolü, results in painful febrile phenomena.

11th.—The same febrile phenomena are manifested after the injection of animal fluids in process of putrefaction.

12th.—Physiological experiments and clinical facts confirm the presence of *moderator centers* in the brain.

Investigations into the Toxicological Properties of Aconitine.

BY D. ACHSCHARUMOW.

The author has used a solution of chloride of aconitine of one per cent. The poison was introduced under the skin, or carried into the stomach. The experiments were made upon frogs, pigeons and rabbits. In large doses aconitine induces death in a few minutes, after painful convulsions and the phenomena of asphyxia.

After the most minute dose, the following symptoms were observed:

Immediately after the poisoning, there was detected a retardation in the pulsations of the heart and in the respiration, together with diminished pressure in the vessels; respiration difficult and dyspnœic; cyanosis was rapidly developed; the temperature of the body was lowered.

Soon there occurred a persistent acceleration in the pulsations of the heart; respiration became more free; sanguineous pressure augmented; at the same time the phenomena of paralysis manifested themselves, and before they had acquired all their intensity, the activity of the heart again sank, and this organ was left distended passively with blood; circulation was arrested, convulsions supervened, and the animal died asphyxiated. After a very small dose the following symptoms appeared.

Salivation, difficult respiration, slight cyanosis, retardation of the pulsations of the heart, diminution of temperature, then, according to circumstances, the normal condition was restored, or the paralytic phenomena increased in intensity.

The author thus formulates his conclusions:

1st.—In poisoning by aconitine, death occurs by asphyxia, and by paralysis of the heart; paralysis which involves the motor ganglia of the heart.

2d.—The poison induces, first, excitation of the medulla-oblongata, which is transmitted to the vagi nerves.

3d.—The vagi nerves are paralyzed by a continuation of the excitation.

4th.—Paralysis of all the spinal motor nerves is induced, as well as of the motor centres of the heart, whose contractions are arrested. Soon the peripheral nervous extremities are entirely paralyzed, and voluntary movements become impossible. The muscular substance, however, remains intact.

5th.—The reflex functions of the medulla and the conductibility of the sensory fibres are not altered, sensibility is not involved.

6th.—The cervical portion of the great sympathetic is, probably, in a state of excitation.

7th.—Aconitine rapidly lowers the temperatnre of the body and the sanguineous pressure.

8th.—No cerebral disturbance has been recognized.

9th.—There is no local effect upon the pupil.

10th.—Applied upon the skin, aconitine does not traverse it, but remains inactive. Upon mucous surfaces it acts as a local irritant.

In a therapeutic point of view the author makes the following remarks:

1st.—Aconitine is not absorbed by the skin.

2d.—Its employment as a sedative agent is useless.

3d.—There can be no reason for employing it as a diuretic or a diaphoretic.

4th.—It may be employed internally in all morbid conditions, in which diminution of the temperature of the body, of the activity of the heart, or of sanguineous pressure, is indicated; as in simple or consecutive hypertrophy of the heart, in cerebral hyperæmias, in apoplexy, and generally in all hæmorrhages. Another indication for its employment is found in all the cases in which there is exaggeration of the action of the involuntary muscles, convulsions, tetanus, eclampsia.

LOOT.

The one hundred thousand destitute children of London are quaintly, and not inappropriately, designated by a cotemporary, *crime seed.*

Pepsine.

The *Chemical News* makes a statement in reference to this product, which contains a valuable suggestion to Western manufacturers, viz.: That the strongest pepsine is obtained from young pigs, which, after having been kept hungry, and then having the gastric secretion excited by savory food, are pithed. The above suggests a means of obviating the greatest objection to the extended use of this article, viz., its high price.

Pigeons and Opium.

Dr. S. W. Mitchell (*Am. Jour. Med. Sciences*) having administered this drug to pigeons, in various forms and in quantities gradually increased to the enormous amount of twenty-six grains, has demonstrated their almost entire unsusceptibility to its influence.

Dr. Salisbury, of Cleveland, Ohio (*St. Louis Med. Reporter*), in pursuit of his investigations into the realm of the infinitesimal, has discovered a new cause for admiration at the wisdom of Moses in his prohibitory regulations against the hog, viz.: That we are indebted to that useful (?) animal for another boon in addition to Trichina, Tapeworm, etc. The Steatozoon Folliculorum, which the Doctor asserts has its original and natural habitation in the skin and surface adipose of the hog, and is then transmitted to the folliclee of the "human face divine."

Holt's Operation for Stricture.

The Medical Press and Circular reports a case of death following this operation, attributed to systemic infection, the corpus cavernosum having been lacerated, and containing pus.

Medicated Pessaries.

Dr. Meadows has proposed to the London Obstetrical Society the substitution of soft soap made into mass with powdered althea, starch or beeswax, for the cocoa butter usually employed in the formation of medicated pessaries. The advantages claimed being greater cleanliness and certainty in action.

The inability of the vagina to absorb fat, occasioning a probable loss of the medicinal ingredients, which being protected by a covering of fat, are passed away without being absorbed.

Syr. Ferri Iodid.

A writer in the *London Pharmaceutical Journal* states that he has in his possession a bottle of Syr. Ferri Iodid., which has been made more than twelve months; it is simply corked, and has been frequently exposed to the air. During the last six months the bottle has been kept only half-full, and the syrup is still in perfect preservation. The method

adopted to secure this result is the simplest conceivable; it consists in exposing the syrup to sunlight for half an hour daily.

Styptic Paper.

It is well known that the perchloride, or as it is some times called, the muriate of iron, possesses styptic or hæmostatic properties in a high dregree. To obviate the inconvenience of carrying it about in solution, and also of applying it, M. Gustave Gabillon, of Paris, has devised a "styptic paper," the method of preparing which is as follows:

In a vessel carefully tinned inside, he keeps boiling for four hours (skimming from time to time, and adding water to supply that evaporated) a solution of one pound of gum benzoin, one pound of rock alum and four and a third gallons of water. As soon as the solution is cooled it is to be filtered and the paper or tissue to be dipped into it, kept there until saturated, and then carefully dried, after which a solution of the perchloride, more or less concentrated, is applied with a brush or a roller. The paper or tissue thus prepared may be preserved for any length of time in a state always ready for use, by excluding it from air.—*Druggist Circular and Chemical Gazette.*

Gonorrhœ.

Dr. C. P. Judkins reports to the Cincinnati *Lancet*, three cases of gonorrhœ, aborted after the lapse of one week, in each case, by large doses (one-half to three-quarters of a drachm) of pure copaiba, from three to four times daily, before meals. One of the cases was complicated with cystitis. The Doctor objects to the use of injections *in toto*, as applied to this disease, asserting that the inflammation is perpetuated by the irritation of the syringe.

Chlorea.

Dr. Willis (Guy's Hospital), discussing this disease doubts that this malady is due to any special disease of the nervous system, but rather like epilepsy, to a disturbance of the whole of the centres; that a weakened condition of the nervous centres being at the root of the malady good nourishment and tonics are indicated, and that medicines having a physiological action upon the nervous system have far less efficacy in controlling this disease than the metallic tonics. —*Boston Med. and Surg. Journal.*

Poisonous Red Dyes.

M. Tardieu reports two cases of cutaneous disease occasioned by red dye in stockings. This dye, when extracted by a skillful chemist, by means of boiling water and alcohol, was injected under the skin of a frog, a rabbit and a dog. These animals all died after periods of four, thirty-six and forty-eight hours respectively, exhibiting the following post mortem appearances: violent inflammation, and purulent infiltration of the cellular tissue at the point of injection; intestines inflamed and distended with liquid fæces, liver involved in fatty degeneration, and lungs uniformly tinted with coloring matter. This substance was extracted from the lungs and livers of these animals and used to dye a skein of silk.

M. Tardieu compares the action of this dye (coralline) to that of croton oil.—*Boston Med. and Surg. Journal.*

Antidote for Strichnia.

J. Dabney Palmer, in a communication to the *Am. Jour. of Pharmacy*, reports the poisoning of four cats by means of strychnia; to two of them the alkaloid was administered on pieces of beef; both died. To the other two it was given on small tufts of valerian, without the least effect. He asks, "Is valerian an antidote for strychnia?"

Tendo Achillis.

M. Delore, of la Charité Hospital, Lyons, reports to the *Bulletin de Thèrapie* the case of a boy, nine years of age, who had severed his tendo achillis with a hatchet. Twelve days after the accident the tendon was exposed, and certain adhesions having been separated, the cut edges were pared and coaptated by four metallic sutures. No traction was permitted upon the sutures, which was prevented by position of the leg. Union had not yet taken place after the lapse of from ten to fourteen days; when the sutures were removed. No separation had occurred; the starch bandage was retained until the fifty-second day. Mobility of the limb, impaired by long confinement, was completely restored in six weeks, at which time perfect use of limb was recovered.—*Boston Med. and Surg. Journal.*

Dr. Samuel J. Jones, late Surgeon in the U. S. Navy, has been appointed Oculist and Aurist to St. Luke's Hospital.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—APRIL 15, 1869.—No. 8.

COMMUNICATIONS.

Discovery of a New Anatomical Feature in Human Blood Corpuscles.

BY J. W. FREER, M.D., PROF. OF PHYSIOLOGY AND MICROSCOPIC ANATOMY, RUSH MEDICAL COLLEGE.

ARTICLE NO. I.

In the CHICAGO MEDICAL JOURNAL of May 15, 1868, Vol. XXV., No. 10, in a brief, hastily written article, I announced that I had, as I believed, discovered that human blood corpuscles "are not, as heretofore supposed, simply bi-concave disks; but, on the contrary, there may be seen, (by the use of Wale's Illuminator,) a nipple-like eminence in the center of the concavity of each well-formed disc. This papillary eminence is abont .00,000,1 of an inch in diameter at its base. That it is a true anatomical form, and not a change incidental to dessication, etc., is shown by its

appearance at the instant of withdrawal of any given specimen, while the corpuscles are still plump and smooth in all other respects."

Continued investigation on this important subject has served only to confirm the announcement then made; and having had the opportunity of exhibiting corpuscles as herein described, to several eminent men of acknowledged scientific ability, and having received their opinion in corroboration of my own, I propose to set forth in this paper the views heretofore entertained upon this subject, and in contradistinction present my own more fully, illustrated by accompanying diagrams, which were drawn by an artist who had never before seen blood corpuscles, and, consequently to be taken as unprejudiced testimony.

Among physiologists and microscopic anatomists there has been but one generally expressed opinion as set forth in standard works, illustrated and otherwise; *to wit*, that the human blood corpuscle is non-nucleated.

It may appear incautious, and even rash, to array one's self against evidence so weighty, but my convictions have ripened under careful and persistent iuvestigation, and I deem the announcement timely and worthy of earnest attention.

It may be superfluous to quote the opinions of authors with whom nearly all are familiar, but for a concise presentation of the subject I deem it advisable.

Todd and Bowman, in treating "of the structure of the red corpuscle" say: "The structure of the red corpuscle of most of the vertebrata may be readily demonstrated in the reptilia—that of the frog, for instance. It is distinctly a nucleated cell—consisting of a delicate cell membrane, within which is a granular nucleus, which may be rendered more distinctly granular by acetic acid. The nucleus is globular, and much smaller than the cell, and the interval between the inner surface of the latter and the outer surface of the former is filled by fluid which holds the coloring matter in solution. Corpuscles of this kind

floated in pure water become distended by the endosmosis of it, burst, and give exit to their nuclei, while the shreds of the cell-membrane are scattered in the fluid."

"It cannot be shown, satisfactorily, that the bi-concave, circular corpuscle of human blood and of that of mammalia is of the same structure as this, because it cannot be demonstrated to consist of cell and nucleus. If it be as the blood-corpuscles of birds, reptiles and fishes undoubtedly are, a nucleated cell, the obscurity of its nucleus is probably due to one of two causes; either it is so large as accurately to fill the cell, leaving no space between the outer surface of the one and the inner surface of the other, or it is so extremely minute as completely to elude our means of observation."

"Mr. Wharton Jones supposes that the mammalian red corpuscle is a nucleus, the cell of which has existed only in the earlier stages of development. Kölliker, on the other hand, affirms that the nucleous disappears while the cell wall is persistent. All that microscopic examination with the highest powers and the best instruments shows respecting the structure of this corpuscle is, that it consists of a delicate membrane, enclosing a semi-fluid material, impregnated with the proper coloring matter of the blood; and that this structure may truly be assigned to it is amply proved by the change of form which it undergoes by the endosmosis of pure water, which will cause it to burst, and evacuate its contents, consisting of nothing more than some minute granules, none of which can be compared to a nucleus. So far as microscopic analysis would enable us to decide this question, we should be disposed to declare in favor of Mr. Jones' view; but it seems greatly opposed by two facts; first, that in the corpuscle of the lower vertebrata, the coloring matter is contained between the nucleus and the cell-wall, whereas, in the mammalian corpuscle it would be contained in the nucleus; and, secondly, that this peculiarity of structure is limited to one class of vertebrate animals. It receives support, however,

from observing the several steps of the development, for the corpuscle exhibits a stage in which a nucleus is visible, (the stage of colored, nucleated cell,) and this nucleus, in the very large corpuscle of the elephant, and likewise in the very small corpuscle of the goat, exhibits a strict correspondence in size with the perfectly formed blood-corpuscles. But here, again, we notice the difficulty above referred to, that in this stage of nucleated cell, the color is found between the cell and the nucleus. It seems to us that further research is required, in order to determine the exact homology of the mammalian red corpuscle.

Mueller says: "The blood globules, both of the human and other mammiferæ ordinarily do not present the appearance of being nucleated, notwithstanding the generality of the presence of a nucleus in other classes render it probable that it also exists here. I believe, even, that by means of certain light I have sometimes been able to discover it in man. On treating human blood with dilute acetic acid the corpuscles suddenly disappear, and nothing remains but a few small granules, in regard to which one is in doubt as to whether they are or are not the nuclei of the globules."

Kölliker, in treating of the blood says: "The red blood-globules, more minutely examined, present the following characters:

Their form is usually that of a biconcave or plane, orbicular disc, with rounded borders, and, consequently, they present a different aspect to the observer, according as the surfaces or borders are turned towards him. In the former case they are pale-yellow, orbicular corpuscles, in which, according to the focussing of the microscopes, the slight central depression which always exists, is indicated, sometimes by an opaque spot in the center, the latter appearance admitting of being confounded with a *nucleus*. * * * * * The blood corpuscle is *constituted* of a very delicate, but nevertheless tolerably firm, and at the same time, elastic, colorless cell-membrane, composed of a protein substance closely allied to *fibrin*, and of colored viscid

contents formed of *globulin* and hæmatin, which, in the adult, present no trace of morphological particles or granules, or of a *cell-nucleus;* they are, consequently, vesicles, whence the name 'blood-cells' is to be preferred."

Longet says: "with man and other mammiferous adults the blood globules appear to be deprived of nuclei. There is not even an exception in the family camelidæ, which, by the form of their globules, approach to those in which the presence of nuclei is not doubtful. That which has been taken for a nucleus is but the thin, central part of the disc. This remark already made by Hodgkin and Lister, has been confirmed by Henle, Donné, Wharton Jones, etc., notwithstanding various Micrographers admit that sometimes among the ordinary globules without nuclei one meets with those that appear nucleated. Such, at least, is the result of the observations made by Wharton Jones, Schultz, Nasse and Busk with man and other mammifera."

As all investigators are so nearly in harmony on the subject of the anatomy of these organic forms, the methods of observation having been uniformly the same, it is deemed unnecessary to make further quotations.

In presenting my own views in contradistinction to the foregoing I wish to call especial attention to my method of investigation. Heretofore all examinations of blood corpuscles have been made by transmitted light, from which we might anticipate, *a priori*, that, with instruments of the same degree of perfection, similar results would be obtained. On the contrary, all of the research upon which my present convictions are based has been prosecuted by the use of reflected light; the object resting upou a polished jet slide.*

The accompanying diagrams set forth faithfully the appearance made manifest by this method when properly pursued.

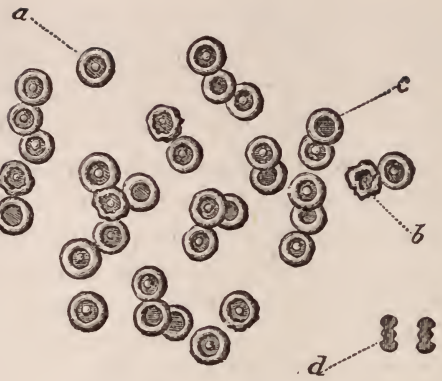


DIAGRAM I.

DIAGRAM I.—*a*, represents the perfect, human blood corpuscle. It will be seen that the center presents a slight elevation, surrounded by an annular depression, while the circumference of the disc is, compatatively, thick, smooth and rounded.

b, represents a disc with serrated and shriveled margin, with a perfect central elevation remaining.

c, a corpuscle without the central elevation.

d, is a hypothetical diagram of a disc placed upon its edge.

DIAGRAM II.

DIAGRAM II.—*a*, represents the perfectly formed, oval and characteristic disc, or globule, of the frog. In the cen-

tral portion may be seen an oval depression, in the center of which can be observed the elevation representing the nucleus. The margin is shown to be rounded, smooth and thickened.

b, is like the former in every respect except the central papilla is absent.

c, a shriveled corpuscle.

d, a corpuscle as it would appear set upon its edge.

It will be seen from the foregoing explanation that these bodies do not all possess a nucleus, or central elevation. In fact, there are in both the human blood and that of the frog a large proportion, perfect in every other respect, that do not possess this peculiarity. Whether this fact is due to an absence of this feature on one of the surfaces of the corpuscle or to its non-existence in a certain per centage of cases, I am undetermined.

I have, as yet, examined but few pathological specimens. In one instance, however, in a case of advanced Typhoid fever, the corpuscles, without exception, were found serrated, shriveled and distorted in the most remarkable manner, with the exception of the nucleated center. This seemed to maintain its integrity.

The reader, by reference to the diagrams, will observe that the corpuscles, both of the human and reptilian blood, are analogous in their general features, as, witness the elevated nuclei in the centers, the surrounding depression and the elevated margins, together with the entire absence of nuclei in nearly equal proportions of each. It will also be observed that certain numbers are imperfect in outline, as if affected by disintegration; and this is true of a similar proportion of every specimen that I have ever examined. This apparent analogy of form and feature between mammalian and reptilian corpuscles only supports what is generally acknowledged should obtain with these bodies in order to bring them in harmony with the known homology of other tissues, from whatever species of animal obtained. I believe that it is never denied that nerve, muscular, bony

and other tissues, when compared with their kind, are essentially alike in their anatomical constitution. Why should blood tissue form an exception to this general rule? Do not the corpuscles perform the very same function, whether floating in the blood of a reptile or in the vessels of man?

With one exception I have not, as yet, extended my observations to the condition of blood discs in the various parts of the body. In the spleen pulp I found them mainly imperfect in form, being generally serrated, shriveled, and seldom nucleated. Hæmatine, in granulated masses, was seen interspersed among the corpuscles. White corpuscles, in great numbers, were arranged around the margin of the specimen.

The Illuminator does not reveal any thing unusual concerning the white corpuscles; they merely appear as non-nucleated, globular bodies. It is remarkable, however, that they never associate themselves with the red discs, there seeming to be a perfect antagonism of position.

---

*Note.—Those who wish to repeat these observations, by means of Wale's Illuminator, will find it indispensable that the object-glass be arranged for uncovered objects, and the discs spread thinly over the surface of the slide. Corpuscles found in defibrinated blood are the best for observation. Those found in rouleaux do not show the nuclei satisfactorily.

CORRESPONDENCE.

The Dynamics of Organic Life.

BY Z. C. M'ELROY, M.D., ZANESVILLE, OHIO.

No author should ever feel displeased with such a notice of his labors as you were pleased to make in The Journal

for the first March, ult., of my monograph "On the Dynamics, Principles and Philosophy of Organic Life."

The question of most interest connected with my proposal to regard all diseased action as modifications of the organic processes of constructive and destructive metamorphosis, and to classify all therapeutic agents as they are found, by experience, to promote or retard them, is, undoubtedly, "How will they work practically?"

The same number of THE JOURNAL contains the conclusion of a very interesting paper by Dr. Wallihan, of Chicago, "On Super Oxygenation as a Therapeutic Measure, with Notes of Cases Treated." These cases it is proposed to take as examples, for the purpose of ascertaining whether they can be viewed as lesions of nutrition and oxidation, and if the treatment pursued influenced these processes, by either promoting or retarding them; and what were the relations of the pathological conditions, and therapeutic measures employed, to the living organism.

As at once a base and starting point in the investigation the following propositions are submitted:

1st.—A change of matter must occur, simultaneously with every manifestation of force, whether in the organic or inorganic kingdoms of nature.

This proposition, it is believed, is universally assented to by the philosophic and scientific world, and, therefore, needs neither proofs nor illustrations.

2d.—There is neither local disease or local remedy.

This is, perhaps, not assented to by any considerable portion of the medical world. It is so contrary to the teachings of the past, as well as the current ideas of the present, that it may require both illustration and proof. The dogma of "the indestructibility of matter" was the basis from which chemistry leaped into an exact science. "The persistence of force" is the magic formula from which rises exact natural science, and "that there is neither local disease

or local remedy," is the basis from which will grow an exact science of therapeutics and practical medicine. And it can grow from no other. That disease does have local manifestations is certainly true; but the generic totals of constructive and destructive metamorphosis must first undergo modifications. So long as these proceed normally in the individual organism, the result is health, not disease—harmony, ease, not discord or dis-ease. Take the alphabetical catalogue of diseases, examine each separately, from "abortion and abscess," to "wounds, and zona, argenti nitratis," and it will be found that from the slightest headache, to the gravest form of fever, the organic processes of nutrition and oxidation are constantly interfered with; and in proportion to the extent of the interference is the gravity of the diseased action. Regard them as separate entities, and the confusion of therapeutics in the past reigns supreme in the future.

But the limits proposed for this paper will not permit of further proof. It may not be new to either editors or readers of The Journal, but it is new and original with the writer. It underlies the whole contents of my monograph —forms the only safe foundation for a science of therapeutics worthy of the name, as well as a science of pathology; or, for that matter, a science of life—Biology.

Dr. Wallihan has been treating certain cases of disease, by introducing into the system a greater proportion of oxygen than is contained in the atmosphere, and has found certain forms of chronic disease to be greatly benefitted. In the absence of any scientific generalization of the relations of oxygen, as well as disease, to the organic processes of life, he wisely feels his way, by carefully collecting the reported results of its empirical employment, as well as the mode and form in which it has been employed by others in the past. Far be it from me to find any fault with Dr. Wallihan, in the course he has pursued. He has worked with accredited agents, and in the accredited modes of the profession, and has done a good work, for which he deserves,

and no doubt will receive, the thanks of your readers and the profession. His paper very properly winds up with reports of some of his cases, the treatment consisting in simply introducing into his patients' systems an excess of oxygen over that contained in the atmosphere which all breathe.

What does oxygen do in the laboratory of organic life? Beyond all cavil its mission is double—death and life. It is the most potent agent in nature, "promoting destructive metamorphosis." And, as the dynamics of all organic life depend on changes of matter, the surplus oxygen he introduced into his patients' systems added something to the sum of the forces of life. He increased activity in the process of destructive metamorphosis, liberated the necessary dynamic force for "promoting constructive metamorphosis," *i. e.*—death and life. In due time, by thus promoting both destructive metamorphosis and constructive metamorphosis—if he gave his patients the necessary organic material in the shape of good food—the normal velocity of tissue change was restored, and the results, his patients were well.

But examine his cases separately, and more in detail, and see whether, pathologically, the organic processes of nutrition and oxidation were proceeding normally.

Case 1st, presents a patient in whom, certainly, the processes of "constructive and destructive metamorphosis" are sadly deranged. Nutrition is capricious, and waste unequal. The normal velocity of tissue changes are widely departed from. She is what is called "hysterical;" that is, her dynamic harmony has been broken up. But there are no marked structural lesions; they are wholly confined to "constructive and destructive metamorphosis." She probably belonged among "well-to-do people," and did not perform the requisite physical labor to make good her daily normal tissue-waste. No mention is made of summing up the symptoms of the temperature in her axilla, which is to be regreted, as the results of a few days' observation would

have thrown much light on her case. Theoretically, it should have been variable, before treatment, alternately above and below the normal standard; while, after treatment commenced, it should have been above natural; and for the first few days of treatment she should have lost weight.

Now, what did the extra oxygen do? Brought the rate, or velocity of repair and waste up to their normal standard. Constructive and destructive metamorphoses were both quickened, and her thermal condition normal, or slightly above, and steady.

While the excess of oxygen was successful in relieving this invalid in less than a month, it was, probably, by no means the only treatment or means by which she might have attained the same ends. Forced exercise in the open air—hard work, if you please—a visit to the sea-shore, or some saline springs, would have, in all probability, as certainly relieved her, and very likely quite as rapidly, because they would do, in the end, precisely what the excess of oxygen did, viz., bring the organic processes of waste and repair up to their normal standard. "Up to their normal standard" is written understandingly, for no diseased action is above or higher than life. No matter how *high inflammation may run*, in any given case, it will always be found a lower grade than normal of organic life, tending, not to higher life, but to death.

Case 2d.—This patient, a lady, was probably, too, from the "well-to-do" class of people, as well as No. 1. The same abnormal phenomena prominent in both. Neither constructive nor destructive metamorphoses were proceeding normally in her case. The excess of free oxygen given in the commencement of the treatment set up a too rapid waste, not in the region of the kidneys alone, but over the whole system, and it had to be greatly diminished for a few days, and some measures resorted to to retard it. At the end of something over five weeks, a chalybeate was added to the oxygen treatment to promote constructive metamor-

phosis, and when the processes of nutrition and waste were restored to their normal velocity, she, too, returned to her friends, greatly benefited.

In her case, compulsory physical exercise in the open air, combined with a sulphur and chalybeate course of natural mineral waters, would, in all probability, have accomplished the same ends.

Case 3d.—From the same "well-to-do" class as the first and second; the cause of her trouble the same. Not sufficient labor to keep constructive and destructive metamorphosis proceeding at normal velocity. No structural lesions, and, as a consequence, the super supply of oxygen performed its mission with certainty. In something over two weeks they were brought up to their normal velocity, and she, too, recovered.

Exercise in the open air, the sea-shore, or saline springs, would have done the same thing.

Case 4th.—So nearly like cases one, two and three as not to require a repetition of the remarks applicable to them all.

Case 5th.—More complicated, and in a male; but still from the "well-to-do" class. The rate of destructive metamorphosis being too tardy, and elimination imperfect, of course he is a "martyr" to "the dyspepsy." Surely, in his case the lesion is in the altered relations of nutrition and oxidation. He inhales the super supply of oxygen, it burns up his effete tissues, and the debris of tissue metamorphosis, retained in his system, is eliminated; and, as soon as the processes of constructive and destructive metamorphosis are returned to their normal velocity, he, too, is well.

Three months fishing off New Foundland, or a sea-voyage, or a season's work in the turpentine business in the Carolinas, would have accomplished the same ends for him.

Let me say, again, no fault is found with the treatment pursued in these cases by Dr. Wallihan; on the contrary, much credit is due him for his discrimination and success;

but his treatment was, after all, empirical; he had, or at least gives, no philosophy for the mode of operation of the excess of oxygen employed in the treatment of them; but here is a formula that will satisfactorily explain the whole thing:

"Super oxygenation compensates for deficiency of physical exercise or labor, in restoring the normal velocity of tissue-changes, or "constructive and destructive metamorphosis."

Has the purpose for which the paper was written been accomplished? Cannot purpose, means and results in the treatment of the whole catalogue of human maladies be more definitely connected by regarding all diseased action as modifications of the organic processes of nutrition and oxidation, and all therapeutic agencies as promoting or retarding them, than in any other way?

Reference to other therapeutic measures than super oxygenation was purposely avoided in commenting on the salient features of them. Only natural agencies were pointed out. It is very probable they all could have been successfully treated without the direct excess of oxygen in the mode administered. It is very certain that such cases have been successfully treated in my practice by using salines, iodides and bromides, to promote oxidation, with metallic oxides and vegetable bitters—the metallic oxides more particularly in "hysterical" or painful cases, or lesions of force, and simple bitters and iron for the more prominent lesions of mutation—to promote nutrition, and there is no incompatibility or failure in using both classes of agents at the same time. But "well-to-do" people will not work in the open air, nor visit saline springs, nor go fishing off New Foundland, so it is a happy circumstance that super-oxygenation enables us, as well as with other means, to relieve them from enduring the penalties inflicted on them for a violation of the laws of organic life.

TRANSLATIONS.

Medical Electricity.

The State of our Knowledge Concerning the Application of Electricity to the Treatment of Disease.

REPORTED TO THE ACADEMY OF SCIENCES, PARIS, BY M. BECQUEREL.

I.—Electro-Therapeutics Previous to the Discovery of the Pile.

Whenever an energetic agent is discovered in nature, the physician, who seeks to relieve the sufferings of his patient, tests its action upon diseased organs, in the hope of affecting a cure vainly attempted by medical science. The attempts succeed, observed facts are associated, are co-ordinated, their laws and relations are reduced; there science commences where empiricism ends. The application of electricity to therapeutics is yet in its first phase, although it has already given satisfactory results in certain cases; that they are not very numerous, is attributable, doubtless, to the very complicated effects of this mode of treatment.

The Greeks, more than six centuries before the Christian era, recognized the property, which amber possesses, when rubbed, of attracting light bodies which may be presented to it; credulous of the marvelous, they attributed to every object a soul, to which they assigned miraculous qualities.

From the time of Pliny amber was already sought for its medicinal properties; women and children, in special cases, wore collars of this substance, a custom handed down to our own time, but now almost abandoned. Appian relates that the shock of the torpedo was used for the cure of the gout and of paralysis; a shock which is identical with that of the Leyden-jar.

Vossius adds that in his time it was used for the cure of inveterate headache. To-day electricity is applied to the same diseases.

It appears, according to Thompson, the historian of the animals of western Africa, that from time immemorial, the negro races of central Africa took advantage of the electrical properties of the silurus for the healing of sick children; the children are placed in a bath filled with water, with this fish, which makes its discharges from time to time; the electricity then, perhaps, acts only as an excitant of movements in the muscles, as in gymnastics.

Centuries must be passed before we reach the era of the discovery of the Leyden-jar, 1746; an epoch when the applications of electricity to therapeutics were so greatly extended, that they were then persuaded that the electrical agent was the principle of organic life.

This remarkable experience produced such an effect upon those who first received the shock, that Muschenbrœck wrote to Réaumur that he would not repeat it were all France to be given to him.

The moral effect was such that he was breathless, and that, two days afterward he had scarcely recovered from the emotion and from the disturbance which he had experienced. Winkler asserted, moreover, that the first discharge from the Leyden-jar had occasioned a cramp throughout his entire body, and that his circulation had been so excited thereby that, fearing a high fever, he had resorted to refrigerant remedies. The prejudice against the dangers of experiments with the Leyden-jar having been weakened, its medicinal application began to attract attention. Nollet appears to have been the first who applied the electrical agent to therapeutics; he commenced by investigating the effects which it produced upon liquids during prolonged action; he observed that it accelerated their evaporation, and that this was by so much the more rapid, as the surfaces of the containing vessels were extended.

Boze observed, at the same time, that water electrified

escaped from capillary tubes in the form of rays, instead of drop by drop, as otherwise.

These experiments, whose results depend upon the repulsion excited between bodies similarly electrified, were regarded as decisive by every physician engaged at that time in the application of electricity to medicine; but they made no deduction therefrom; they believed, for example, that they might conclude from them, that electricity accelerated the circulation of the blood; but experience has not failed to demonstrate the reverse.

Bertholon and Jalabert, like Nollet, applied electrical discharge to the treatment of paralysis.

Animals were killed by means of strong discharges, in order to determine the disorders which they would determine. In a frog whose chest had been opened, the lungs were inflated, and were expelled from the body, by the repulsive action of electricity; the heart still continued to pulsate for some minutes.

A strong discharge was passed through the head and the body of another frog; there was a sort of distention of all the limbs; one hour afterward they were restored to their original appearance. This was the first instance of tetanus produced by electricity.

Franklin's theory appeared. It assumed that there existed in every body a certain quantity of electric fluid; if this quantity was increased, these bodies were found to be in a state of plus (positive); if it were diminished, they were in a state of minus (negative) electricity. Physicists and physicians, carried away by this theory, imagined that when the body of man ceased to be in its normal condition, by any disturbance whatsoever of its functions, there was diminution of the electric fluid; in this case it was necessary to administer an additional quantity. This theory, which is now abandoned, is still, however, sustained by some physicians.

In order to apply electricity to the healing art, machines, sufficiently powerful to furnish a continuous current of

sparks, more or less strong, Leyden-jars of different sizes, a cushion and excitors of different forms, were then used, which had been indicated as infallible means of cure. With jars shocks were given; with excitors sparks were drawn from different parts of the bodies of patients. Again, electricity was administered in the form of a bath, as is still practiced to-day. It was believed to have been established that electricity was of some utility:

1st.—In contractions which depended upon affections of a nerve.

2d.—In sprains, etc., when the inflammation is passed.

3d.—In indolent tumors.

4th.—In some cases of paralysis.

But it must be stated, these different modes of treatment were not preceded by physiological experiments.

The remark may be made cursorily that these pathological cases are precisely those in which electricity is applied to-day.

Such was the condition of electro-therapeutics, when Volta made his admirable discovery.

II.—Electro-Physiological and Electro-Therapeutical Investigations since the Discovery of the Pile.

Galvani having discovered, in 1790, that by arming the muscles and the nerves of a frog, properly prepared, with two different metals, of which one only was oxydizable, as has been recognized subsequently, their simple contact would suffice to produce contractions; this fundamental experiment was the point of departure for the discovery of the pile.

According to Galvani all animals possess specific electricity, which is secreted in the brain, and resides in the nerves, which transmit it to all parts of the body. The common reservoirs are the muscles, of which each fibre should be considered as possessing two surfaces, upon each of which is found one of the two electricities; hence, he compared the muscles to a small Leyden-jar, of which the

nerves are the conductors. He believed that the electric fluid was drawn from the interior of the muscles into the nerves, and from these to the exterior surface of the muscles, from whence there resulted an electrical discharge to which corresponded a muscular contraction.

I only mention this theory because it served as a point of departure for all physicians who were, at that time, engaged in galvanic investigation. When it was announced, a struggle commenced between Galvani and Volta. The latter proved that the electricity produced by the contact of the two metals, that is to say by the oxydation of the zinc, was the cause of the contraction. At one time Galvani was considered victor, when he proved, aided by his nephew, Aldini, that the metallic arc was not necessary to excite contractions, since they were obtained in a frog newly prepared, by placing the crural muscles in contact with the lumbar nerves. Volta replied that this was only a generalization of his principle, according to which all bodies sufficiently good conductors established themselves always, by their mutual contact in two contrary electrical conditions; but Volta was deceived. Galvani had just discovered, conjointly with Aldini, the proper current of the frog, of which Nobili, Marianini, Matteucci and DuBois-Reymond had made a most thorough study. This discovery is doubtless one of the most important which has been made in electrophysiology, for if one day we should arrive at the discovery of the intervention of electricity in the phenomena of life, this discovery would have been the point of departure for investigations which would have been made in this direction. The discovery of the pile startled the School of Medicine of Paris, which nominated a commission to repeat all the experiments made upon galvanism since 1790.

This commission determined that the electricity of the pile penetrates the nervous and muscular organs more profoundly than that from the ordinary electrical machines, and that it provoked lively contractions, strong pricking and burning sensations in localities whose diseased condi-

tions rendered them otherwise insensible to sparks, or to ordinary shocks.

The National Institute, aroused by the general movement which the effects of galvanism had initiated, nominated, in 1799, a commission composed of Coulomb, Sabattier, Pelletan, Charles, Fourcroy, Vauquelin, Guyton and Hallé, to examine and verify the phenomena of galvanism. This commission composed of the most eminent men of the epoch, established a distinction between the electric and the galvanic fluid; it assumed to perceive in the animal organization, a principle in which resided the essence of the mutual relations of the nervous and the muscular systems. The animal arc may be formed of nerves and muscles in mutual contact, as Galvani had discovered. This arc is not interrupted by the section of a nerve or its ligature, provided that the part remain in mutual contiguity during muscular action. It is not so, however, in the case of the living animal, since it suffices to cut a nerve in an animal, or to enclose it in a ligature, in order to deprive it of the faculty of communicating motion to the muscle to which it is distributed. It recognized the fact that galvanic influence appeared to be excited by exercise, and to be recuperated by repose; and here was, for the first time, indicated the fact resulting from the action produced upon a nerve by a continuous current.

The commission advises, very judiciously, in order to secure accuracy in the experiments and in their appreciation, that the state of health of the animal be previously assured, and also the manner in which it has been preserved and nourished up to the moment of the experiment; experimenters have not always had due regard to this wise recommendation.

The commission of the Institute then investigated the application of electricity as a physiological agent, in a scientific spirit.

No estimate can be formed of all the experiments which were made at this epoch, and which led to results too

thoroughly forgotten at this day. We quote two examples only:

Wilson Philips, having cut the nerves of the eighth pair of a rabbit, discovered that by reuniting the two extremities by means of a metallic wire, and by transmitting through them a current, digestion and respiration, which had hitherto been difficult, became easy as soon as the pile was put in operation.

Dr. Andrew Ure experimented upon the body of a criminal immediately after execution, with a pile composed of a large number of elements strongly charged. One of the poles being put in communication with the spinal cord, the other with the sciatic nerve, all the muscles of the body contracted simultaneously, with convulsive movements. Ure succeeded in imitating, up to a certain point, the play of the lungs, by transmitting a current from the spinal cord to the ulnar nerve, he caused the fingers to move with agility; by transmitting a discharge from one ear to the other, and moistening them with salt water, the muscles of the countenance assumed horrible contractions; the action of the eyelids was very marked. This is the first example of the mode of localized electrization at the present day, a mode which was formulated in 1834, in these terms: (Ann. de Chem. et de Phys., 2d série, t. LXVI, p. 27,) by M. Masson, pupil and friend of our celebrated confrère, Savart:

"The property in the induced current of affecting only the points touched, permits the submission to its action of any portion whatever of the body. Thus, by placing two metallic plates upon the extremities of a finger, after having placed them in the current, this latter will only traverse the finger. The importance of this discovery will be readily recognized by those who are engaged in the application of electricity to medicine."

Let us proceed to the application of Voltaic electricity to therapeutics.

Plaff applies it to paralysis of the optic nerve, as Magen-

die has since done successfully, when the paralysis is incomplete.

It has been employed advantageously in paralysis of the extremities, in feebleness of vision, and in amaurosis due solely to defective irritability of the optic nerve; in deafness dependent upon diminished nerve-power; in coryza, and in aphonia; in paralysis of the sphincter ani, and in that of the bladder.

Many other applications have been made, and have demonstrated that actual practitioners traverse the same circle as their predecessors.

Have they obtained more or less success than the latter? Statistical records fail to answer the query. Doctor Fabre Palaprat, subsequently, making use of interrupted voltaic currents, at more or less closely approximated intervals, obtained decided effects in cases of atony or feebleness in the functioning of organs, provided that no lesion or inflammation existed, as well as in some of lymphatic engorgement.

Let us delay a moment before making an exposition of the results obtained by eminent physiologists, who have furnished the data by means of which electricity is more methodically applied to therapeutics to-day than formerly, in order to recall facts which it is necessary to take into consideration, when it is desired to compare physiological effects produced by electrical action to those resulting from mechanical, physical, chemical or vital actions.

Animals have excitable parts, sensitive parts, and parts deprived of these faculties. Haller, who is continually encountered in the paths which lead to physiological experiment, dissected the parts and applied the scalpel, acids, or other chemical agents, in order to detect the special properties of each one of them. He thus examined parts which were agitated, and those which experience sensations of pain. By irritating a nerve or one of its ramifications in a muscle, there resulted an abrupt and rapid movement; when a nerve corresponding to a muscle was too strongly

irritated, and for too long a time, it ceased to contract. The nerve being cut, if it was irritated below the section, the animal experienced no sensation; but the muscle contracted immediately. If the irritation was effected above the effect was inverse. Electricity produced, nearly always, similar results.

Ligation of a nerve arrests the action of the current, as does that of other stimulants; provided it be sufficiently firm. In this case, after detaching the ligature, it is no longer possible to excite contraction by irritating the nerve above the ligature.

M. Matteucci has recognized the fact that poisons do not all act in the same manner, and that, when the animal is killed by electric discharges, the excitability of the nerve by the current is destroyed. This observation ought to be taken into consideration in this regard, that it shows the danger of exciting the nerves too strongly.

Twenty-five years ago (in 1841), in a memoir crowned by this Academy, our associate, M. Longet, demonstrated experimentally the independence of muscular irritability, and of excitability of the motor nerves. This important fact has been confirmed subsequently by our associate, M. Claude Bernard, by the aid of curare; he has, indeed, perceived that the muscles may remain contractile, even when the motor nerves are no longer excitable. The electric current appears to have been the only one of all the excitants tried, applied to muscles, which could induce their contraction without the intervention of nerve fibres. This fact is very remarkable in this regard, that it seems to establish an analogy between the mode of action of electric currents, and that of nerves in producing muscular contraction.

It has been already seen that a nerve too strongly irritated lost the faculty of exciting contraction in the corresponding muscle, and recovered it by rest. The same is likewise true when the current generated by a certain number of pairs has circulated for a certain time between the

muscle and the nerve; the muscle no longer contracts at the opening or the close of the circuit; but if the direction of the current be changed the contractions manifest themselves anew. By reversing, a certain number of times, the direction of the current, the excitability of the muscles of the frog may be arrested or revived at will; it is this which constitutes what is called the phenomenon of voltaic alternatives; but if the organs of a frog, traversed during a certain period by a current of determinate intensity, lose the contractile faculty they have, nevertheless, the power of contracting under the influence of a more energetic current.

The muscles of a frog, which have lost their contractile faculty by the prolonged passage of a current, recover it by repose; the same is true of a living animal; but it is necessary to take into consideration the will of the animal, which might modify the effects of currents up to the point of neutralizing them entirely, especially if the currents have no great intensity, and the animal has a high degree of vitality.

Marianini and other physicians have observed that if the current is directed into the nerve alone, following the directions of the nervous ramifications, that is to say, from the head to the extremities, there is contraction upon closing the circuit and no effect upon interrupting it. If the current traverses in the reverse direction, there is no contraction upon closing the circuit, it is manifested, however, upon interrupting it. There is absence of contraction when the nerve is affected normally longitudinally, as M. Matteucci has demonstrated.

Marianini discovered, moreover, that the current, according to its direction, produced either contractions or painful affections in the frog, as well as in other animals; when the current is direct, going from the head to the extremities, there follow vigorous contractions of the posterior extremities, from the closure; upon opening the circuit the contraction is weaker, the dorsal column bends upon itself

sustains a violent shock, and, it sometimes happens that the animal cries out. With the reverse currents opposite effects occur.

It seemed, then, that the nerve was organized in such a manner as to propagate certain movements in the direction of its ramifications, movements which are only transmitted with difficulty in the opposite direction, and from which results the sensation of pain.

Nobili succeeded in giving tetanus to a prepared frog by interrupting and re-establishing the current rapidly. This effect is due, probably, to change in the condition of the nerve, which passes rapidly from the natural to an artificial state, and reciprocally. It may be asked if tetanus, natural to men and animals, would not originate from similar modifications consequent upon acute pain. If it were so, it could be arrested by utilizing this fact discovered by Nobili, that frogs having tetanus persist in this condition under the influence of a current of a certain intensity, and are frequently completely distended under the action of a current directed in the reverse direction. Experiments conducted in this direction have already given satisfactory results.

The existence of the proper current of animals, as has been previously recognized, was indicated and put in evidence for the first time by Galvani; it was investigated successively by Nobili, Matteucci, and DuBois-Raymond; each had his part in the analysis of this important discovery, by the aid of which it was determined that nerves and muscles are electrometers; that is to say, that they are constituted in such a manner as to afford currents when they form closed circuits; these electro-motors probably sustain a rôle still less understood in the phenomena of life, as their organization would suggest.

Nobili perceived that the contraction produced by contact of the crural muscle and the lumbar nerve was due to an electric current, whose existence he had established, a current extending from the paws to the head; the nerve is, therefore, negative.

M. Matteucci established this fact with the living frog; he showed that the proper current of the frog was not weakened by allowing it to circulate through the animal pile, which will be discussed hereafter, whence he concluded that the extremities of the animal do not paralyze in an appreciable manner; an observation which has its significance, for, were it otherwise, it could not be conceived how the muscles and the nerves could intervene amidst vital phenomena as electro-motors if they did always intervene, since polarization would produce an inverse current which would weaken their action at every instant.

M. Matteucci next discovered that muscles are electro motors, since a current could be obtained by placing in communication the interior of a muscular mass with its surface. Nobili obtained a stronger current by forming a coronal pile of cups with pairs composed each of a thigh and the corresponding nerve.

M. Matteucci having placed the nerve of a frog prepared after the mode of Galvani, that is to say, the lumbar nerve still connected with a mass of crural muscle, upon the muscle of another frog, he perceived the former contract at the instant when the last muscles were caused to contract mechanically; it might be inferred from this that the contraction of the muscle produced an electric current, reacting upon the galvanoscopic frog. M. DuBois-Reymond having studied this effect deduces therefrom the following consequences:

The transverse section of a muscle is negative, and the longitudinal positive; nerves having no natural transverse section, they must be cut in order to have a current. These laws appertain to the most intimate constitutive elements of muscles and nerves. The electro-motor power ceases after death, when the muscles and nerves have lost their irritability.

At the moment of contraction a sudden and great diminution in the muscular current and in the nerve is detected, when it transmits a motion or a sensation.

A difference exists between muscle and nerve in their electrical relation; when a nerve is traversed throughout a portion of its length by a continuous current, according to its direction, it increases or diminishes the influence of the proper current. This condition cannot occur in muscle.

Nerves of motion and of sensation act similarly.

The investigations of Jean Müller and of M. Longet into the employment of electricity, for the distinguishing of nerves of motion from nerves of sensation, should be mentioned here, in consequence of their importance in electro-therapeutics. M. Longet has likewise made profound investigations upon nerves of sensation, which possess great interest, and which we recommend to the attention of physiologists.

Neither should reference be omitted to the curious experiments of M. Helmholtz, relative to the duration of the phenomena of muscular contraction, and of the transmission of nervous excitation. By means of ingenious processes and apparatus he succeeded in perceiving that the rapidity of the propagation of nervous excitation in the sciatic nerve is about thirty metres per second. Cooling the nerve greatly diminishes this transmission.

EDITORIAL.

In compliance with the wishes of several distinguished members of the profession we crowd out of our columns a large amount of valuable matter in order to give place to the correspondence of Drs. Baldwin and Nott in relation to the next meeting of the Am. Medical Association, feeling that the large majority of our readers will unite with us in a cordial endorsement of the sentiments expressed therein.

FOREIGN ITEMS.

Investigations into and Experiments upon the Physiological and Therapeutical Properties of Curare.

BY MM. AUGUSTE VOISIN AND HENRY LIONVILLE—FROM LA GAZETTE MÉDICALE.

The authors have thus epitomized the principal results of their labors: "It appears to us interesting to indicate some of the most prominent facts which curaric influence, intoxication or poisoning of animals have permitted us to observe.

"From the first, the effect manifested in the economy by the curare has always appeared to us characteristic, and we have never, although observing closely, and varying the doses and the animals, had to confound it with the effect resulting from other poisons, as strychnia, for example, since it is to this that some authors, MM. Martin Magron and Buisson, especially, have compared it heretofore.

The little clonic convulsions which are observed, the fibrillary trembling, which, localized sometimes, are more frequently generalized, this minutely tremulous condition of the body which augments by external impressions received by the animal, and which increases, so to speak, gradually, and extends itself over the whole body, betraying itself by the fibrillary trembling of the muscles, or by the undulatory state of the hairy skin, which seems as though agitated gently by the wind; all these appearances, in a word, are not the tonic, forcible, abrupt, sudden convulsions manifested by an animal under the influence of strychnia. We have not, under the influence of curare, that sort of violent discharge which increases by the most feeble exterior excitement, a slight touch, the least noise,

and which curves, in an irresistible manner, the whole body of the animal, like a cord which bends suddenly the two extremities of an arc. The aggregation of the curaric phenomena, shivering, is one of the manifestations of fever.

Another point which has seemed to us to deserve attention is the possible modifications of temperature during the curaric phenomena.

We have observed a very marked elevation of temperature in the rectum of animals in those instances in which the doses were poisonous. There was indicated, indeed, an augmentation of three to four degrees.

However, the exterior temperature of the whole body of the animal has never seemed to us to exhibit very perceptible modifications, even in connection with the manifestation of discoloration and *heat of the ears* upon which M. Claude Bernard has especially insisted.

But when we have found this latter phenomenon unmistakably manifest in our patients, it was always associated with a very decided augmentation of the *redness and heat of the face*, and this facial redness and heat have always seemed to us the predominant characteristic.

At the same time we may detect noticeable effects upon the circulation, as we believe, contrary to the opinion of certain physiologists, developed during the earlier stages, and subsequently modified considerably if the dose be more active.

In reference to the visual apparatus, we have detected those disturbances which are indicated by modifications in the diameter of the pupils, and we have seen the pupil doubled in size under the influence of curare.

But if the dose be still more active, this augmentation is also more considerable, and soon attains to the double size; then occurs this curious phenomenon: to the augmentation of the pupil succeeds, almost suddenly, a diminution, and even a constriction.

These disturbances have, under our observation, always appeared to accompany another phenomenon, which, we

think, has not, hitherto, sufficiently attracted the attention of experimenters; it is the *double exophthalmia* which supervenes after the employment of active poisonous doses, and which in four of our experiments is recorded with minute detail.

Moreover, we have observed that these different disturbances, those of the pupil, of the injected sclerotic, of the exophthalmic eyes (which we have taken care to complete by examination of the modifications in the sight itself. *Diplopia*, *derangements of accommodation*, observable only in patients capable of describing it accurately, were concomitant phenomena, and might very reasonably be assumed to be simultaneous, and, as it were, associated expressions of the same general state (disturbance of the vaso-motor system, and paralysis of the muscles of the eye).

In reference to the nervous system, the authors have determined anew that curare is a poison of motor nerves; that muscular irritability is preserved intact, and that death from curare poisoning occurs only from abolition of motor power in the entire economy.

LOOT.

L'Univers Médicale contains the following results of experiments upon the solubility of dipotheritic membranes. Subjected for an hour to the vapor of sulphate of mercury false membrane was not dissolved, and when subjected to the action of a concentrated solution of pepsine, its solution was effected only after twelve hours, which period was shortened to *eight minutes* by the addition of six to ten drops of lactic acid. Neither sulphuric, hydrochloric or nitric acids accomplish the desired result. Acetic and citric acid render diphtheritic membrane transparent but do not dissolve it completely. Two drops of lactic acid in five grammes of water dissolved twenty centigrammes of tough membrane in three minutes. Lime water produced the

same result still more rapidly; lactate of lime is inert-Weak solutions of soda and potassa dissolved the membrane in eight or ten minutes, and better than when con. centrated. Nascent bromine and bromine water only disintegrate the membranes; bromide of potassium and the sulphates, bicarbonates and nitrates of soda and potassa. Chloride of zinc and chromic acid are without action. The chlorates of potassa and soda dissolve membranes but slowly.

Monstrosity.

Dr. O. C. Gibbs, of Frewsburg, N. Y., reports to the *Lancet and Observer* the birth of a monstrosity characterized by the absence of cranial and spinal bones, of the entire integument, and of the spinal muscles from the third cervical to the fifth lumbar vertebra, also of the anterior muscles; the liver, stomach and heart being exposed. The brain, enclosed in its membranes, hung suspended down the back.

Fragilitas Ossium.

Dr. Joseph Jones, of the University of Louisiana, reports to the St. Louis *Med. Archives* the case of a dark mulatto who had sustained, from the most trivial accidents, fractures of the extremities to the number of fifty, by reason of which he had become completely dwarfed and misshapen, and unable to walk except with the use of crutches. The parents were healthy, and the condition of their son was attributed by them to the results of an attack of typhoid fever which was treated with large doses of calomel, which the Doctor does not endorse. Dr. J. indicates the following points of interest in this case.

1st.—The painless character of the fractures.

2d.—The integrity of the general health, and the absence of allevidences of syphilitic or scrofulous cachexia or taint.

3d.—The constitutional origin and hereditary character of the disease was indicated by the brittle state of the bones in a cousin of the subject.

Prolapsed Funis.

Dr. Yarnall reports to the St. Louis *Med. Archives* fifteen cases of prolapsed funis occurring in the practice of Dr. Papin, of that city, in which reduction was accomplished by placing the patient upon her elbows and knees, the pelvis being elevated, and passing the loop within the womb, beyond the promontory of the sacrum, and retaining it there until the head was again engaged in the superior strait. Of the fifteen cases ten were born alive, and five died, one from compression of the cord by the forceps, one from severing of the cord by the same instruments, a third from the two free administration of ergot, and the remaining two from impossibility of retaining the replaced cord, in consequence of the transverse position of the fætus.

Monstrosity.

Dr. Steele recently presented to the St. Louis Medical Society a double headed monstrosity; a large and well-developed double-headed male child, having two entire and separate vertebral columns; two sacra separated by a rudimental mass of bone; a single pelvis; two legs; three arms, the third or middle one between the heads having one humerus, (double-headed, *i. e.* having two artieular facets,) one ulna, two radii, and two hands, (the palms approximating,) with two thumbs and seven fingers, the little fingers being merged into one, one bifurcated sternum, the ribs of the opposite sides articulating with it; the posterior ribs fused, making a median line resembling a third vertebral column; four scapulæ, the two median being confluent at their superior angles; two normal stomachs, with intestinal canals distinct for their upper two-thirds, and merged and single for the lower third; one rectum, one anus; two pairs of lungs and two hearts normal, one liver formed of two right lobes fused and contained in a common investment; two gall bladders, the right rudimentary; two spleens, one to the right, anterior, and the other to the left, posterior, in the thoracic cavity, into which they had escaped from the abdomen through an opening, one inch and a half in diameter, in the left leaflet of the diaphragm; two kidneys; one bladder and one penis.—*St. Louis Med. Arch.*

Dr. Baldwin desires the medical journals of the country to publish these letters in full or to give an analysis of them in April. E. S. GAILLARD.

Advance Sheets of the Richmond and Louisville Medical Journal for April, 1869.

[LETTER I.]

MONTGOMERY, ALA., March 15, 1869.

DR. E. S. GAILLORD, EDITOR RICHMOND AND LOUISVILLE MEDICAL JOURNAL:

MY DEAR SIR:—I send you this letter and the inclosed correspondence between Dr. J. C. Nott and myself, for publication in your journal.

You must pardon me, dear doctor, for the personal allusion contained in this correspondence to yourself. From the fact that you were an active participant in the late war, and suffered deeply by its results, and from the additional fact that you have occupied a prominent position in the medical profession before and since the war, I thought I might take the liberty of referring to you as a true representative of the professional sentiment of the South.

For the same reason I addressed a communication to Dr. Nott, (formerly of Mobile, now of New York,) whom it is well known, was a staunch adherent of the Confederate cause; who, at the advanced age of sixty years, gave up his professorship in a college to which he was devoted and of which he was the founder; relinquished his large and lucrative practice and neglected his then ample fortune to take a commission in the army of the South; serving in hospitals, in camp, on the march, in the front or wherever he was ordered, with all the devotion and faithfulness of his enthusiastic and honest nature. He had but three children, all sons; one lost an arm in infancy; the others, promising in a ripening manhood all that a father's heart could desire; both of these went to the field at the first call for troops and both perished in the army.

When such men as yourself and Nott, from the medical profession, and Gen. Wade Hampton, from the head and front of the army—all *representative men*—men who have, in the time of her greatest need, rendered distinguished services to the South, who have been torn and mutilated in

person, lacerated and crushed in affections, wrecked and ruined in fortune, can take the proffered hand of friendship and urge conciliation, harmony and fraternization for the good of science and the welfare of the country, I think the personal allusion which I have made to you is pardonable, while it should put to the blush those few "who still urge discord and alienation."

I do not think that a charge of egotism could lie against you in consequence of your publishing what *I think* or say of you. In justice to me you can not omit the reference to you, for, by so doing, you would manifestly defeat one object of the letter. I have seen proper to use your name as a *representative man*, and in a manner to serve a purpose which is obvious throughout the letter, and the *facts warrant the allusion.* I am, dear doctor, very sincerely yours,

W. O. Baldwin, M.D.

[LETTER II.]

Montgomery, Ala., March 2, 1869.

Dr. J. C. Nott, New York:

My Dear Doctor:—As you are aware, the next meeting of the American Medical Association, is to be held in the city of New Orleans, on the first Tuesday in May next, and I write to urge you to be present on that occasion. Your numerous old friends in the South would be most happy to meet you there; to shake you by the hand in this fraternal reunion, and to welcome you again to the scenes of your morning life. It must be gratifying to you to know, my dear, good old friend, when, in your solitary moments, memory sometimes takes you back to the home of your youth, (to review the incidents of almost a life-time spent in active and arduous professional duties,) that your cotemporaries here, who witnessed your devotion to the cause of science, whilst they appreciated the value of your labors, still hold in most affectionate remembrance that honorable courtesy and charity which ever distinguished your conduct towards your professional brothers. I am glad to be able to say, my dear doctor, that the spirit of your example still lives with us, and, I believe, will teach us from the grave; will teach those who still labor in the fields you have left, when life with you shall have ended its hardest lessons. Nothing, I assure you, would give me, individually, more pleasure than to see your honest face on that occasion. It

will be such a fitting time for you to meet us, and one which will probably never present itself again, when you could see so many of your old friends.

My correspondence has been somewhat extensive during the past eight or nine months, and I feel justified in saying that the great mass of the profession South is in full accord and sympathy with the Association. You may have seen some little dissatisfaction expressed in newspapers over a *nom de plume*, indicating the author to be a physician, but I assure you such sentiments are confined to but very few, and have failed to reach the great heart of the profession. I was grieved, however, to see even this manifestation of opposition to the great representative interests of the medical profession of this country. It has no root and can bear no fruits in science or general beneficence.

This dissatisfaction grew out of the action of the Association at its meeting in 1864, in relation to a preamble and resolutions introduced by Dr. A. K. Gardiner, of New York. These were, in fact, a remonstrance against the war ethics of the Government, and, in substance, provided that the President of the United States, heads of departments and members of the United States Senate be requested by the Associatien to "take such action as shall cause all medicines and medical and surgical instruments and appliances to be excluded from the list 'called contraband of war.'" The action taken on these resolutions by the Association was to lay them on the table indefinitely, and which, in parliamentary *parlance*, I believe, means that it was "not desirable to consider them" at that time. From this action some have contended that the Association lent its influence and support to sustain the Government in this feature of its ethics of war.

The beautiful preamble and resolutions referred to, as having been introduced by Dr. Gardiner, are certainly a most graceful proof of a noble and generous mind, and must be regarded by all as the offspring of the purest and most unselfish charity and benevolence. Yet how far the language used by others in commenting upon this action of the Association is justified by the facts; how far this body lent its influence and support to the Government in the policy complained of, or to what extent it committed itself to the principle, by laying these resolutions on the table, are questions which may very well admit of difference of opinion.

No member can claim for the Association exemption from fair, frank and honorable criticism, and when thus conducted amongst ourselves, or through the legitimate channels of *medical* periodicals, with moderate language and in a courteous and respectful temper, I can see no objection to it, and think it may, in the end, lead to harmony of sentiment and unity of purpose. I have been particularly grieved, however, to see that some, in their zeal to discuss the points above referred to, have resorted to the columns of *newspapers*, (devoted to common and general politics,) for this purpose. The public feel no particular interest in controversies like this, and, in the language of our code of ethics, "as there exists numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, * * * * * * publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit upon the faculty." These injunctions, though applying to our daily intercourse with each other, are equally applicable to us in our associated and general relations.

I am not prepared to say what the usages of modern warfare are on the points raised in Dr. Gardiner's resolutions, or whether there are any recognized or established ethics among civilized nations on this subject. But that it is in accordance with the purest and highest dictates of humanity for belligerent powers to allow the enemy's sick and wounded to be supplied with medicines and surgical appliances from within their own lines, when they cannot be otherwise obtained, I think none will deny, unless the supply be at a time when such action might thwart the movements or prejudice the safety of an army. And, if the duty of regulating such matters had been assigned to the American Medical Association, or even to the army medical corps, and they had established, or advised the establishment of an ordinance making these articles contraband of war, I should feel that their action had not harmonized with the spirit which has ever characterized the conduct of our profession toward suffering humanity.

This, however, was not the case, and I can very well imagine that those who voted against the Association taking the action urged in the preamble and resolutions

referred to, could give good reasons which influenced them, at that particular time, to desire no complication with their Government upon a question, in the discussion and decision of which they were regarded as in no way authoritative, and the direction of which had been assumed by high government officials, who had long since estalished and practiced a policy in reference to it.

I assume, then, the broad ground that it was a question with which the Association had nothing whatever to do, and one which was not properly before it for discussion; and, it seems to me that it was expecting too much of our Northern brothers to suppose that they, at a time when all the sinews of war were called most vigorously into execution, would place themselves in antagonism to their government upon a question which was entirely outside of their *professional position and accredited duties.* In doing so, they certainly would have been transcending their legitimate sphere, and meddling with the prerogatives of those to whom the regulation of the ethics of war had been assigned and who claimed exclusive jurisdiction over the question.

Subjects of this kind certainly formed no part in the plan of their organization. They were there solely for the purpose of discussing questions purely scientific and professional, and not such as grow out of civilized warfare. Whatever, therefore, was objectionable in the ordinance alluded to, the high functionaries of the government were alone responsible for it. It was a political and war measure with which the Association had no more to do than did the Pope of Rome or the worshipful grand master of a Masonic Lodge, or any other humane or charitable individual or Christian and benevolent organization in the land. In fact, every man in Christendom was as much to remonstrate with the Government for any violation of the rules of civilized warfare, as were the members of the Association.

It is a very serious and forced conclusion to say, that the Association gave its influence and support to the Government to maintain it in this policy, because it refused at that particular juncture to enter its protest against it, by the the adoption of these resolutions. If, *as an Association*, they had assumed a vindictive or hostile attitude towards the South and advised the adoption of this or any other unjust proceedure on the part of the Northern government, there would have been just reasons for complaint on the

part of Southern physicians. This, however, was not the case. The Association simply held itself *firmly* to its *professional position*, to its *acknowledged sphere*, to its *accredited duties*, and refused to go outside of that position to discuss a question which concerned that body no more than it did any private individual in the land.

It is not wise, nor is it required by any creed of general courtesy or ethics, that honor shall always forbid that which honor fails to sanction. Men are not expected or required to denounce every measure of which they cannot approve. There are often good reasons why they should not. Are they then to share the odium of measures entirely foreign to their sphere and beyond their control? There is certainly much difference between the man who commits crime and him who fails to remonstrate with the criminal! As well might we reproach and rebuke the high court of chancery for failing to lecture the world on the subject of religion, the giving of alms to the poor, or for any other philanthropic work which might be calculated to lessen the woes and mitigate the sufferings of fellow beings.

Society, and especially governments, has assigned to different individuals and classes their peculiar sphere and respective duties, and the world owes much of its harmony to this fortunate arrangement. We have our own code of ethics and etiquette, and our own standard of morals, and, if we adhere strictly to these, we cannot interfere with the ethics of war established by ordinances of government. One of the great reconciling principles in the philosophy of life is a proper regard for the rights, duties and principles of others. Whilst, by the very nature of our calling, we are intimately connected with the interests of humanity, and should labor by every means at our command to promote its benefactions, we must be careful in our zeal for a good cause not to hazard the position and influence already gained, by invading the precincts and prerogatives of others.

The restraints and usages of governments in times of war may seem to us, in many particulars, unnecessarily harsh, oppressive and cruel, and, indeed, what civilian ever witnessed the operation of martial law who could not find grave objections, both to its humanity and equity? But when these have been ordained by persons to whom we are only subordinate, we cannot be responsible for results, and should, in no way, share the odium, simply by failing to place ourselves in open antagonism to them.

As long as we labor with all the professional, intellectual and moral efficiency at our command, for the fulfillment of duties properly within our legitimate and recognized sphere, we shall have accomplished all the good for humanity that the world can reasonebly expect or require of us.

But even suppose the Association did commit an error, in fact and in spirit, in failing to remonstrate with its government as stated, where is the wisdom, at this day, of opposition to its future and permanent interests? Suppose that the feeble assaults which have been made upon it should swell into an hostility whose magnitude should in the end mar its progress, compass its disorganization and defeat its claims to a grand nationality, who could receive credit for such a work? Where would be the glory of success or the fruit of such victory? Could science, could humanity, could the country thank one for such a service?

What has brought the science of medicine to its present state of advancement but the labor of *intellects combined in organization?* Like the tiny insect which lays up its stores for the wants of winter, we, too, must acknowledge the great law which sanctions the wisdom of associated labor. The imperishable grandeur and usefulness of all sciences owe their highest development to organized effort. The future glories of the science of medicine in this country, lie embodied in the powers yet latent in organization, and he who seeks to disturb this great element in its prosperity is no friend to progress.

The animus of the Association has shown itself to be honorable and kind in every reference made to its Southern members, during and since the war; honorable to itself, honorable to the profession, honorable, just and generous to the South. When I went to its last meeting (in Washington) I did so from a sense of duty, and with the earnest desire of seeing the two sections united in their professional relations and purposes. I did not solicit any honors, and asked no man to vote for me for any office. Yet with a meagre representation from the South, they conferred upon me the highest office in their gift. I knew myself unworthy of the high distinction, and felt it was not intended for me. I knew it had a broader and higher significance than that of a mere tribute to personal and private ambition. I knew it to be in keeping with that kindly spirit displayed by the Northern delegates towards their Southern brethren throughout their "Transactions," and that it was but a fresh offering of the olive branch of peace. In this spirit I

accepted it. No man asked me any thing in relation to my political sentiments. I cannot boast of performances in the late struggle, but I have never disguised the fact from any one, that in all the earnest desires of the heart which constitute devotion to a cause, I yield to none in my loyalty to that which has gone down in the gloom of defeat and for which those tender youths, your son and mine, fought side by side, and fighting fell for principles held dear by you and me. I would not stultify myself on this point for all the honors which could be heaped upon me by the medical profession or any other class of men. Nor do I think my Northern brothers would respect me more for being false to my section. In the death of my boy I found the hardest heart-sorrow of my life, and the weary years which have since passed by have been powerless to still its anguish; and yet I could but feel a mournful pride in a knowledge of the fact, that he died on the field of glory and *true to the land which gave him birth.*

But the crushed affections and blighted hopes of the father, who has yielded a noble sacrifice to his country, as he sits in silent and sacred memory of his holiest grief, can find no relief by barbing the anguish of his heart with feelings of malice, hatred and revenge towards those who, in honorable combat, had been made the instruments of his sorrow. Natural affection does not require this; true manliness does not demand it.

No, Doctor, I do not wish to cherish feelings of bitterness with the memory of my son. I wish to forget all that is painful and harrowing to the heart, and to remember him as he was, the soldier, patriot and Christian, falling in honorable warfare, and, that the hand which sent the fatal ball which deprived him of life, was that of some brave and generous spirit, moved by the same high purpose, the same stern sense of duty, the same devotion to principle and country, which guided and actuated him. So far from entertaining sentiments of unkindness towards our brothers of the medical profession North, growing out of this affliction, my only feeling has been, that if any one of them had been near him in that dreadful hour, his highest care would have been to have drawn, if possible, the fatal ball from his breast, and restored him to life and health.

How unwise and unprofitable it is to seek to mingle the temper of partizan strife with the affairs of a great science. If the gallant General Hampton, whose blood flowed so freely in the late war, and whose home, with the homes of

his people, was consumed and made desolate by the flames of the Northern army, can speak gratefully of "the spirit of conciliation, the magnanimity and the kindness" of those "who recognize us as no longer foes but brethren," can, for his country's good, declare his willingness to bury "all past differences in one common grave," to "accept the right hand of fellowship * * * so frankly extended," and greet, as a "comrade," him whose hand "so lately grasped the sword," but now bears the olive branch of peace," shall we be so sectional and prejudiced as to nurse feelings of hostility towards a brotherhood, from whom we have ever received only evidences of marked kindness and honorable courtesy?

If the talented and independent editor of the Richmond and Louisville Medical Journal, Prof. E. S. Gaillard, who lost his right arm, when a medical director, in the discharge of surgical duties on the field of battle, thus depriving him of all hope of further advancement in the special department which had been the choice of his youth, for which genius, education and a thorough method had so well prepared him, and to which the achievements of early manhood had already given such brilliant promise of successful ambition; I say if he can advise that we should cover over the past "with the mantle of personal and professional charity," that we should "take the out-stretched hand, accept the offer of friendliness and reconciliation;" and that the reception of the "*medical men of America*," when they assemble in New Orleans, in May next, should be "not only a hospitable reception, but a warm, a manly and a generous welcome," cannot those who never felt a wound, and can even jest at scars, lay aside feelings which can neither yield fruits to our noble science nor do honor to our manhood? Is any one vain or weak enough to believe that our Northern brothers will derive an advantage from fellowship, union and harmony which we will not share in an equal ratio?

Pardon me, dear doctor, for trespassing so long upon your valuable time. I know you will excuse it in the interest which you feel in the general prosperity of the medical profession of the whole country, and especially in the desire which you feel to see your Southern friends come fully up to their duty, in meeting the honorable advances which have been made by our Nothern brothers, looking to a complete and perfect fraternization. I think the

American Medical Association is to be the power through which a greater good is to be accomplished for the profession in this country, than has yet been achieved. On this point you may, perhaps, hear from me at some future time. I will only say now, that its organization had its inception chiefly in an idea which has not yet been realized—that of elevating the standard of medical education in this country. But I believe its labors in this direction will yet be felt and acknowledged. To this end *it must be national* and represent the interests of the profession in every part of the the country. Those who comprehend the grandeur of its germ, appreciate full well the ultimate possibility of its nature, and will see to it, that the inspiration which gave it birth shall be worked to a successful end. The advancement of science, the affections of an enlightened brotherhood, the interests of society and the good of humanity are all united with it, and from every section I have the most gratifying assurances of a determination to bury all other sentiments in the one great purpose of promoting harmony and concert of action, with the kindest feelings of fraternal regard. Assure our friends of the North of this, and tell them we desire to meet them in large numbers in New Orleans in May.

With assurances of the highest regard, believe me, dear doctor, most sincerely and truly your friend,

W. O. Baldwin, M. D.

[LETTER III.]

New York, No. 4 West Twenty-Second Street,
March 8, 1869.

W. O. Baldwin, M.D.:

My Dear Doctor:—Your letter of the 2d has just come to hand. I hasten to reply by return mail.

Whilst I am fully sensible that your kind feelings for me have tempted you to speak in terms of praise beyond my merits, I have the vanity to believe that you do not over-estimate my high sense of obligation to our noble profession; my unceasing efforts to uphold its dignity, and my endeavors to promote friendly feelings amongst its members. I have always maintained that we could not deserve or command the respect of the world, unless we respected each other, and preserved a proper *esprit de corps*.

When I was about to take my farewell of the people of Mobile, among whom I had lived for thirty years, the lead-

ing citizens gave me a public dinner, and the members of the profession a handsome reception, at which I was presented with a piece of plate, on which was engraved the name of every regular practitioner of the city. This, to me, was the crowning glory of a long career, as it was the grateful evidence to me that my constant efforts to keep the members of the profession together in brotherly love and usefulness had not been in vain.

You may well believe then, my dear friend, that your present efforts in the same good cause, on a wider field, meet my hearty approbation and sympathy. I have nothing to suggest in addition to your excellent letter, which covers the whole ground at issue; it is temperate, honest, manly, and in every way becoming the high and responsible position in which you are placed. I doubt not it will be responded to by the profession North, South, East and West, in the same spirit in which it was conceived.

The construction you have given to the action of the American Medical Association, on the premable and resolutions of Dr. A. K. Gardner, to which you refer, corresponds precisely with what I have heard expressed by all the members of the profession I have met at the North. The time of the Association was fully occupied with matters that properly belonged to it, and these resolutions, trenched upon political or military considerations which were foreign to the business of the Association, which they could not influence. Any debate upon them might have led to some unpleasant remarks from some impetuous member, and it was therefore, best to lay them on the table. If such resolutions had been laid before any hundred members of our profession, during the war, at the South, what, let me ask you, would have been the result? There is a statistical law that throws a certain per cent. of unwise heads into every assembly of this kind, and the less opportunity they have of talking, the better.

Now, sir, I beg leave to say a word of my personal experience, since the war at the North. Soon after the was was closed, I was summoned to Washington as a witness in the Wirz trial, and seized the occasion to run over to Philadelphia to see what I could discover that was new, in the way of books, instruments, practice, etc., we having been shut out from the world for four years. Not only did the medical gentlemen of Philadelphia receive me politely, but they seemed to feel as if they thought I might feel some

delicacy in presenting my rebel face in their midst, and were more desirous, than I had ever seen them, of treating me with hospitality.

About a year ago I came to pitch my tent in the city of New York, determined to ask no favors of the members of the profession, and not one of them can say that I ever solicited an introduction to him; and yet it would seem like egotism were I to tell of half the respect, the hospitality and kindness I have received, both in and out of the profession in the city of New York. It is but justice to the faculty in New York to say that in tone, talent and attainment, it will compare favorably with that of the large capitals of Europe.

But, suppose we admit that the action of the Association on the resolutions of Dr. Gardiner was dictated by sectional and unchristianlike motives, this does not alter the case. The war is over; our prosperity and happiness depend upon our return to the former status of the country, politically and socially; passion and prejudice should be laid in the grave with the half million of brave men that have been buried in the bloody strife. The olive branch has been gracefully and cordially tendered by our medical brethren at the North to those at the South, and it is your duty to accept it frankly and in good faith.

The medical profession has a great mission to fulfill. Medicine is not only a healing art, but is the mother of anatomy and physiology in their most extended sense; of botany, chemistry, mineralogy, geology, etc., in fact, of all the natural sciences, from which have sprung the useful arts. It has been the great fountain, from which has flowed the elements of civilization, from the foundation of the Egyptian empire to the present day.

Now, my dear friend, will the medical profession at the South be outdone in magnanimity? Will they permit a petty pique, or even the remembrance of a great civil war, in which, perhaps, we were all to blame, to cross the path of science, and to mar a great enterprise like that of the Medical Profession?

God forbid! My many old friends must throw aside all minor considerations and come forward in sustaining your efforts to maintain the true honor of the South, the dignity of our profession and the cause of humanity.

Very truly, your friend,

J. C. Nott.

THE

CHICAGO MEDICAL JOURNAL.

Vol. XXVII.—MAY 1, 1869.—No. 9.

ORIGINAL COMMUNICATIONS.

On the Prolonged Use of Bromide of Potassium, in Large Doses, and its Value in the Treatment of Epilepsy.

BY J. N. DANFORTH, M.D., CHICAGO.

The past ten years have proved unusually prolific as regards new remedies; and of these no one has obtained a better reputation, or more rapidly grown in favor with the medical profession than the bromide of potassium.

The experiments of Locock, Brown-Sequard and Behrend, long ago established the value of this remedy in cases where obstinate wakefulness or "coma vigil" was the predominating morbid condition; and this without very much regard to the essential or underlying cause thereof. But a more extended and comprehensive experience has likewise proved that the bromide of potassium is an exceedingly valuable remedy in many of the chronic diseases which directly involve the great nervous centers. Prominent

among these may be mentioned epilepsy—both on account of its obscure pathology, and the sadly inefficient means for its treatment, heretofore at our command. Indeed, from the earliest dawn of medicine as an inductive science, up to the present period of active research and discovery, the unfortunate epileptic has been universally abandoned as hopelessly incurable.

Dr. Watson (Practice of Physic, page 425), after enumerating the formidable array of remedies which have been successively recommended, tried and condemned, says: "This long array of drugs, all of which have been known, or supposed, to accomplish a cure, affords, in truth, one of the strongest evidences of the intractability of the disease under any plan of treatment"—a remark, the truth of which, every physician of any considerable experience has too often felt himself obliged to assent to.

Latterly, however, the bromide of potassium has seemed to outrank all other remedies in the treatment of this fearful disease—having been brought prominently before the profession by the writings of Dr. J. Russell Reynolds, of University College, London, and of Drs. Bazire, Brown-Sequard, Rannkill, Radcliffe and Hughlings Jackson, of the British National Hospital for the Paralyzed and Epileptic. The experience of these eminent physicians seems to indicate pretty clearly that, in order to derive any real, or at least permanent benefit from this drug two conditions are always and absolutely essential: 1st. that the remedy be given in large doses; 2d. that its administration be persistently and uninterruptedly continued, for months, or even *years*, if a cure be not sooner accomplished. As this course contemplates the administration of a remedy of acknowledged and well-established potency in doses larger, and for a period of time longer than has been, or is now deemed altogether safe by the great majority of physicians, I propose to raise, and attempt, as far as I am able, to answer, these two queries: First, to what extent may the bromide

of potassium (or ammonium, for one of these salts may be looked upon, as, in its therapeutic relations, the type of the other) be given without endangering the safety of the patient? and, secondly, How long may these unusually large doses be continued, without producing injurious or alarming results?

First, as to the dose. An ordinary dose of the bromide is stated to be "from three to ten grains, three times a day;" but this quantity, as experience has abundantly and repeatedly proved, is utterly inefficient and useless in the treatment of epilepsy in the adult. On the other hand, the experience of many eminent and trustworthy observers, in different quarters of the globe, seems to have demonstrated, beyond dispute, that this remedy, given in much larger doses, as from fifteen to sixty grains twice or thrice daily, *does* exercise a marked control over the epileptic attacks, whatever may be said in regard to a permanent and unqualified cure.

It follows, then, that these somewhat startling doses *must* be given, or the patient *must* be abandoned to his fate, and epilepsy must continue to be, as it has been, the opprobium of medicine. The terrible nature of this disease, and the almost inevitable mental ruin in which it terminates, demand of us the employment of every efficient measure at our command; nor should the ill success of the past, or prejudice, or merely theoretical notions as to its incurability, be allowed to stand in the way of the careful, faithful and prolonged trial of any and every remedy which seems to promise the least benefit to this most unfortunate class of patients.

In the present instance, the *real* truth seems to be, that the bromides have been repeatedly given in doses of from fifteen to forty, or even sixty, grains, not only without any perceptibly injurious effects, but with the happiest results, especially in the treatment of epilepsy; that this practice is daily gaining ground with those physicians whose opportu-

nities for acquiring experience in the treatment of epilepsy are such as to be of the greatest value, and command the fullest confidence; and that the practitioner has hardly the right to withhold this remedy, in cases where the epileptic attacks are sufficiently frequent to demand treatment at all.

Probably the National Hospital for the Paralyzed and Epileptic has, heretofore, afforded the widest and most fruitful field for observation in regard to the true merits of the bromides; and the testimony of the officers of this institution are very pointedly in their favor. Says Dr. P. Victor Bazire (Trousseau, Vol. I, p 99, note), "At the National Hospital for Paralysis and Epilepsy, bromide of potassium has been extensively used by Dr. Brown-Sequard, Dr. Ramskill, Dr. Radcliffe, Dr. Hughlings Jackson and myself." * * * These gentlemen speak of the remedy in terms of unqualified praise. They are in the habit of using it in doses of from fifteen to twenty or thirty grains twice or thrice daily—or in accordance with the demands of each individual case. The dose most commonly employed by them, however, is fifteen or twenty grains twice a day, given when the stomach is empty; and in this quantity, writes Dr. Bazire, "I have seen patients who had taken the bromide for two and three years" without any injurious effects whatever. But Dr. J. Russell Reynolds is, perhaps, the most earnest advocate of large doses. "Bromide of Potassium," writes he, "in small doses, has appeared to be of little or no service; but in large doses it has scarcely ever failed to give much relief;" (System of Medicine, Vol. 2, p 280,) and, again (op. cit. p 968), "the cure of epilepsy is effected by doses varying from five to forty grains, given three times daily;" and the latter dose, he adds, "does no harm, for it may be taken for many months and even for years, without producing derangement of any sort, or in any direction." M. Behrend relates a case in the *American Medical Times*, Vol. 6, p 45, in which he gave twenty-five grains three times a day for more than a week, with the

happiest effects, and adds that "it produces in these large doses neither disagreeable nor toxical effects." Dr. Samuel R. Percy, of New York, has given "eight drachms in seventy-two hours, without headache or other unpleasant symptoms."

It is not my design, however, to enter the lists as the champion of any system of dosing, large or small, or to present a one-sided and partisan view of a subject of such practical and growing importance; but rather to collate and briefly state the facts on both sides. While, therefore, it seems to be well established that the bromide may be safely and beneficially given in very large doses in the great majority of cases, it is also true that unpleasant and injurious effects have, occasionally, been met with. The symptoms indicative of an over-dose, or of "saturation" of the system, are those which are usually recognized as specific of bromine, or "bromism." There is debility, sluggishness, stupor, drowsiness, hebitude. The conjunction becomes insensible, the pupil is dilated, the sense of taste is impaired, and general torpidity of the various functions ensues. Directly "disorders of motility manifest themselves;" the patient "lounges about, his gait becomes altered, and he staggers and rolls like a drunken man." (Bazire.) These symptoms disappear, however, if the medicine be suspended, and some mild stimulant is substituted. Dr. J. Russell Reynolds states, in his usual precise manner, "having seen given K Br. to many hundred of individuals, I have witnessed no ill effects from its administration. I say advisedly *no* ill effects, for in only three cases have there occurred any unpleasant symptoms which could by any possibility be referred to the drug." In one of these three "was some swelling of the nose, and of the submaxilary glands;" in another an "irritable vesicular eruption appeared upon the skin;" these symptoms rapidly disappearing, in both cases, directly the drug was suspended. In a third case there was "the recurrence of syncopal sensations,

which subsided on the addition of twenty drops of chloric ether to each dose of the bromide." (System of Med. Vol. 2, p 281.) But these effects are comparatively rare; are slowly developed, and are exceedingly trivial when compared with the benefit which almost certainly follows the administration of the remedy; and, as already stated, they invariably disappear if the medicine be withheld for a few days.

Secondly: How long may the administration of K Br. in large doses be continued with safety? A partial answer to this question has already been given; a more complete response, however, may be found in the positive statements of the writers already quoted. Dr. Reynolds insists that the remedy may, with entire safety, be given in large doses for any length of time—"for many months, and even for years;" and that "the dose should be gradually increased; and the exhibition of the drug should be most patiently carried on, until all indications for its use shall have ceased. The rash, or acne, on the skin which, is occasionally seen, "is not determined by the quantity of the bromide that is taken;" it sometimes appears after a few doses of five grains each have been taken, "and it has been absent in many cases where thirty grains have been taken three times daily, for periods of six or even twelve months." Bazire, with equal confidence, says: It is remarkable how long moderate doses of the drug can be administered without sensibly affecting the system." "I have seen patients," continues he, "who had taken the bromide for two and three years, in doses of from ten to fifteen grains, two, and sometimes three times a day, with occasional short intermissions only, and whose general health had not, apparently, suffered." It would be perfectly easy to extend these extracts—all strongly corroborative of those already given—to almost any extent, but it scarcely seems necessary.

The conclusion is just and fair that the bromide may,

with safety, be administered in large doses, as high, even, as thirty grains thrice daily, if need be, in the treatment of epilepsy; that it should be persistently given for many weeks and months; that its effects should be carefully watched; that it should be suspended the moment any symptoms of "saturation" or of "bromism" appear; but that it should be immediately resumed in smaller doses, as soon as these symptoms disappear. To this it may be added that the amount demanded in each individual case can, generally, and probably always, be determined, after a few weeks of careful observation. Indeed, it is quite possible that the best effects of bromide in the treatment of epilepsy are only reached when the system is brought under its influence to a point just short of actual "bromism."

What is the real value of bromide of potassium, in the treatment of epilepsy? Does it accomplish a thoroughgoing and permanent cure, or is it merely palliative?

It is very difficult to frame an answer to these queries which shall cover the whole truth. In the present state of our knowledge, and with the comparatively limited experience which physicians have, up to the present time, had in the use of this remedy, it is quite impossible to say precisely how much may be expected from it. But the following propositions are probably not far from the truth:

1st. In a limited number of cases, no good effects can be perceived, even after the remedy has been persistently taken for weeks, or even months.

2d. In a very small proportion of cases, positive cures have resulted; that is, confirmed epileptics have been absolutely free of attacks for a period of time which warrants the conclusion that an absolute cure has been accomplished; and this even, after having discarded the remedy for many months.

3d. In a very large proportion of the cases submitted to systematic and careful treatment with the bromides, great benefit has resulted; in many the attacks are entirely pre-

vented, so long as the medicine is regularly taken; in others the attacks have become very much less frequent, and less persistent, while great improvement in the bodily health, and a more cheerful and hopeful state of mind have likewise resulted; in still others the improvement has been much less, but sufficient to encourage both patient and physician to persevere in the use of the remedy. In fact, an absolute cure, on the one hand, and absolutely no benefit, on the other hand, seem to be the rare exceptions; while in the great mass of cases, the patient receives very marked benefit, in that the attacks are rendered very much less frequent, or altogether suspended during the employment of the medicine; in that the general health usually undergoes a marked improvement; and in that cheerfulness and vivacity take the place of despondency, gentleness and patience supplant irritability and moroseness, and the whole demeanor of the patient becomes changed and improved. These are the results which have been obtained by those who have had the greatest experience in the use of the remedy in question. Bazire says: "It is infinitely superior to all other remedies that have been recommended against epilepsy." Dr. C. Bland Radcliffe is equally emphatic in his testimony, namely: * * * * "The conclusion at which I have arrived is, that bromide of potassium is the only remedy, in epilepsy, upon which much reliance can be placed." Dr. J. Russell Reynolds, however (who is, *par excellence*, the advocate of large doses), seems to have met with the best results. After alluding to its power as a palliative, he adds, "in some cases, it has completely cured the patient, and the cure has been permanent for years, *and is so now*. Brown-Sequard, Duckworth Williams, Ramskill and Hughlings Jackson are no less earnest in their advocacy of the claims of this remedy. It is useless, however, to summon a cloud of witnesses to sustain a point already beyond dispute.

My own experience in the use of K Br. as a remedy for

epilepsy has been somewhat limited. A long life-time of private practice, even in a populous city, can be expected to furnish comparatively few cases of this most distressing malady; and it is very difficult to retain cases under treatment sufficiently long to accomplish much good by any remedy—much less a remedy which the patient is told, at the outset, he must take for "many months, perhaps for years." I may be permitted, however, to conclude this paper by the relation of a single case, which must stand as the type of several others which have come under my observation. In doing this, I shall state the facts as briefly as possible, merely premising that it was a case of true and unmitigated epilepsy, of long standing.

Case.—Peter M., aged twenty, consulted me in Sept., 1867, for epilepsy. Ten years previously, while living in Canada, he drank the contents of the camphor bottle, and ate the undissolved camphor remaining in the bottle. For twenty-four hours afterwards, according to his mother's account, he was comatose, and exceedingly pale, "almost like death." After this he vomited freely, when the symptoms improved, and he slowly recovered. In less than a month he had a severe attack of epilepsy (this being his first attack), and from this time onward the attacks recurred with increasing frequency, until, when I first saw him, the intervals were never longer than a month. The eyes were dull and listless, the countenance vacant, the memory defective, and the aspect of the patient was that of semi-imbecility. I prescribed ten grains of bromide of potassium three times a day. In the course of the next two months he had two attacks. The dose was then increased to fifteen grains, three times a day. He shortly after had another "fit," after which they disappeared, and for fifteen months succeeding he suffered not a single attack. Meantime his general appearance improved; the countenance assumed a more intellectual aspect, he became more vivacious; and he even sought, and obtained, employment, giving satisfaction

in the capacity of fireman to a stationary engine. At the end of the time last mentioned, he began to act as "night-watchman," and ceased taking the medicine with regularity. The result was that before a month had passed, he had a recurrence of epilepsy. The bromide was now resumed, and the epileptic attack again ceased. After taking the remedy for several weeks, without any interruption, swelling of the submaxilary glands and soreness of the throat came on; the medicine was suspended for a few days, when these symptoms at once disappeared. But another epileptic seizure was the penalty he paid for the temporary suspension of the remedy. Bromide of ammonium was now substituted for K Br., in doses of fifteen grains three times a day, and he has constantly taken one of these salts in quantities varying from forty-five up to sixty grains a day, up to the present time. No injurious or unpleasant effects, beyond those already mentioned, have, at any time, appeared; on the other hand, the general health has steadily improved, and the patient has, for many months, pursued his employment without interruption.

This case affords an excellent illustration not only of the *good*, but of the ill effects of the bromides in the treatment epilepsy; and of the results which we may reasonably expect in the great majority of instances. But this result, even, is well worth achieving. Any remedy which will, to any extent, mitigate the horrors of this dreadful disease, is, indeed, a boon and a blessing to its unfortunate victims.

Case of Acute Rheumatism—Pericarditis and Pneumonia.

BY DR. FRED. B. WOOD.

BIG RAPIDS, MICHIGAN.

EDITORS JOURNAL:

I was called, Feb. 15th, to visit Mrs. T., age 24, American. The patient stated that her health had been good until about

the 10th, when she was attacked with pain and tenderness in the left knee joint, afterwards in the right knee, right ankle and wrist they all being swollen and reddened at my first visit. A part of the time since her attack she had suffered from anorexia, thirst, and severe pain in the præcordia, for which a sinapism had been applied. Aside from this she had received no treatment. I immediately began the alkaline treatment with potash and soda, with small doses of colchicum.

Feb. 24.—On this date there was present a well-marked pericardial friction murmur, with the symptoms of acute pericarditis. The pulse was 124, respirations 60. There was a sharp pain in the præcordia on deep inspiration. In connection with the above treatment four ounces of whisky was directed daily, with sufficient opium to procure relief.

25.—Patient more comfortable. Pulse 120, respirations 54. The affected joints were all painful and tender. The friction murmur was louder than on the previous day. The treatment was continued.

26.—Pulse was 114, respiration 40. Treatment the same.

27.—No change.

28.—Suffered more pain in the præcordia, which was quite tender. Affected joints tender but not painful.

March 1.—There has been no alteration until this date, when she became much worse. The pulse 180; very feeble. She was greatly prostrated, and almost moribund; also complained of great pain in the chest.

The examination being extended revealed the signs of pneumonia in the lower lobe of the left lung. Marked dullness on percussion, and the bronchial respiration existed over this lobe. Impending dissolution denoted. The lips were livid, and the face had a dusky hue. I now withdrew all treatment excepting whisky, opium and ammonia.

2.—One p. m. Pulse 126, respiration 58. Resting well since nine a. m. Has taken half an ounce of whisky, five

grains of carbonate of ammonia, and ten grains of chlorate of potassa every half hour.

3.—Some improvement. On this date I suspended the use of the chlorate of potassa and began giving sul. morphia, $\frac{1}{8}$ of a grain every hour; other treatment the same.

4.—Pulse 116, respiration 42. Complains of but little pain. Rests well.

5.—Complains of pain more severe. Bronchial breathing continued over lower lobe of left lung.

I now increased the whisky to one ounce each hour. Carbonate of ammonia 15 grains, morphia sul. $\frac{1}{4}$ grain, also to be given each hour.

6.—Improvement marked. Pulse 112, respirations 38. Complains of no pain; rests well. I ordered beef tea, eggs and milk in moderate quantities. From this date until the eleventh there was but little change, when the respirations had become vesicular over the whole of the affected lobe of the affected lung. Some soreness but no pain in the joints. The friction murmur has almost entirely disappeared.

Pulse 100, respirations 30. I ordered whisky ℥ viij to be taken each day. Eggs 4, milk oj, and beef tea o. ss. each day.

15.—Saw my patient to-day. She considers herself almost well. A well-regulated, full diet ordered. Patient dismissed.

Remarks.—I have given a condensed account of the history of this case from day to day, after the development of pericarditis and pneumonia, up to the time when the improvement was fairly under way, with reference to the treatment employed.

The treatment was determined by the existence of the affections just named, without regard to the fact that these affections were developed in the course of rheumatism.

How far the measures employed contributed to the favorable issue of the case I leave the reader to judge.

TRANSLATIONS.

Regeneration of Nerves.

BY ALPHONSE LAVAREN AND CH. ROBIN.

[Translated for the Journal from Schmidt's Jahrbucher, Leipsig, Jan., 1869.]

Alphonse Lavaren, by means of experiments upon pigeons and young rabbits (Recherches experimentales sur la regeneration des nerfs. Téhse de Strasbourg, 1868. 4.) has arrived at the following conclusions respecting the regeneration of nerves:

1st. Nerves divided or resected at short intervals, can be reunited by a permanent cicatrix of nerve substance.

2d. The nutrition of nerve depends upon the influence of nutritive centers, which are principally emitted with nerve ganglia.

3d. If a nerve be separated from its nutritive center, it becomes atrophied.

4th. The degeneration of a divided nerve is thus determined, in that the nerve tissue undergoes fatty transformation and is absorbed.

5th. The degeneration seizes, simultaneously, the entire peripheral section of a divided nerve.

6th. The reunion of the two segments of a divided nerve is brought about through a tissue, which is rich in young cells.

7th. It seems to follow, that of this tissue, the blood-clot, between the two segments of the nerve, organizes itself.

8th. In the midst of these cells the nerve-fibre originates, in the same manner as the nerve-fibre in the embryo developes itself.

9th. The regeneration can not take place if the two seg-

ments of the divided nerve are widely separated, or if they lie in an old, suppurating wound.

10th. The repair, then, begins in the peripheral nerve-segments, if the connection with the nutritive centers is restored.

11th. The essential element of reparation lies in this: that the nerve-fibre, a secretion from the nuclei of the intervening cell-membrane, becomes again visible.

12th. The reparation seems to proceed from the center to the periphery.

Upon the publication of Lavaren's valuable work, Charles Robin (Journ. de l'Anat, et de la Phys. v. 3. p 321. Mai et Juin, 1868) has followed with a brief statement of his own observation of the nerve-reparation above-mentioned. The regeneration begins with the formation of a rich connective tissue, of a reddish, grayish-red, or yellowish-red tint, between the primitive bundles of the two segments, which gradually, in the interstices between, proceeds to where previously the resected nerve lay. In this is found only embryo-plastic substance (the connective-tissue, and young cells of Lavaren and others), together with an amorphous substance and capillaries. At first this tissue is weak, and easily torn, and also rich in vessels. Robin particularly urges the existence of a fine, amorphous, granulated mass between the nuclei and capillaries. The nuclei are partly ovoidal; the ovoidal exist in so much larger numbers, that very speedily the section is filled up by them.

After a couple of days a central connective-tissue of ovoidal nuclei is formed, and appears as fibro-plastic, spindle-form, or stellate cells (plastic cells of other authors). From this the amorphous substance is formed, and of it the entire tissue seems to consist. In this tissue Robin discovered, in dogs and rabbits, from sixteen to twenty-five days after the division of the nerve, for the first time, nerve-fibre, or nerve-tube, which resembled those in the embryo.

The nerve-tubes are formed of elongated, ovoidal nuclei.

A number of nuclei combine in the formation of the single nerve-tube. These nuclei are distinguished from the embryo-plastic nuclei, in that they are longer, narrower, paler, and more finely granulated. They lie in the same direction, in ranks one behind another, yet without touching; the narrow interstices between are filled with a pale, finely granulated mass, which is as wide as the nucleus, and so they appear as thin bands, with parallel edges, which seem at first to be actually in contact. These bands are, at first, 0.003 to 0.004 Mm. in width, becoming gradually wider, yet increasing in length, while the nuclei push out toward one another, and, indeed, at first somewhat more rapidly. These bands are 0.005 to 0.007 Mm. in width, about eight to ten weeks after the nerve division has taken place, and resemble Remak's bands; and now they undergo a succession of changes, from which it is evident that they correspond to the nerve-tube. Just as the embryonic development of the peripheral nerves is formed, so also, here, the external membrane of the nerve-tube, and not the axis-cylinder, is the first part of the central nerve-tube which appears. That is to say, the axis-cylinder is not, here, the first part of the nerve-tube which appears.

These bands approach each other simultaneously, and in great numbers. In the middle group of bundles, which is not easily separated from the surrounding connective-tissue, begin the principal changes in the nerve-tubes, and, further off, the same appear in the peripheral bundle; the fine granulation disappears, the bands become paler, and in the center, more transparent, and, upon the sides, appear two parallel pale lines of 0.001 Mm. in thickness.

At this stage of the regeneration the gray or Remak's band is enclosed in nerve-tube. This increases rapidly in size, the nuclei remain enclosed in the membrane, and the granulations lose themselves more and more in the membrane. In consequence of this development the number of nuclei diminish, and they themselves become smaller.

In the canal of the tubular membrane is observed a homogeneous, whitish, strongly refracting fluid, which is recognized as fibre, or myeline. From the ninth week, and often as early even as the sixth week, the myeline may be recognized in the form of globules, or accumulated in isolated spots of the membrane; whereby these acquire a varicose appearance.

An axis-cylinder is first determined in three or four weeks after the section of the nerve. S. C. B.

Medical Electricity.

The State of our Knowledge concerning the Application of Electricity to the Treatment of Disease.

REPORTED TO THE ACADEMY OF SCIENCES, PARIS, BY M. BECQUEREL.

III.—Results obtained by Different Contemporaries.

After having detailed the electro-physiological phenomena produced by voltaic electricity, which must not be lost sight of in therapeutic applications, we will proceed to speak of results obtained in these applications by the contemporaries, MM. Duchenne (of Boulogne), Namias, Tripier, Poggioli, Scoutetten, Cineselli, Pitet; we have collated the results collected by Remak, long since dead, in order to compare them with those which they have obtained; but in order to utilize them, we will previously revise, in a few words, the facts established hitherto, and of which we have already spoken.

It has been generally recognized by physicians who have preceded those engaged to-day with electro-therapeutics that electrical treatment has for its object to stimulate organs which function imperfectly, and in which life is not

extinct, in order to habituate them gradually to function normally. It seemed to result from their observations that the medical employment of electricity is indicated in the three following cases:

1st.—When it concerns the re-establishment of contractility in muscles which have lost it, when the loss of contractility does not involve, or no longer involves, cerebro-spinal lesions.

2d.—When it refers to the establishment of general sensibility, as well as the special sensibility of the organs of sense, this sensibility being abolished or simply diminished.

3d.—When it is necessary to reduce to the normal condition exaggerated or perverted contractility or sensibility.

Have practical physicians obtained other results with new apparatus? It is doubtful.

M. Duchenne (of Boulogne) uses the method of localized electrization indicated by M. Masson, but which he has perfected, generalized and rendered practical. He operates thus:

He takes dry or moist electrodes, by the aid of which he can, at will, concentrate the electrical action upon the skin, or cause it to traverse this latter in order to confine it to organs situated beneath, either in the nerves, the muscles or the bones, and when the epidermis is very thick, the discharge traverses only the dermis and produces sparks, and a peculiar affection, without occasioning any physiological phenomenon.

If he places upon two points of the skin one of the rheophores moist and the other dry, the part upon which this latter is placed experiences a superficial sensation which is cutaneous. In this case, according to M. Ducheune, the recombination of the two electricities is effected in the dry portions of the epidermis after having traversed the dermis by means of the moist rheophore. By moistening, very slightly, the skin, at the points where the epidermis is very thick, there is produced, in the parts to which the dry rhe-

ophores are applied, a comparatively superficial sensation, stronger than the preceding, without sparks or crepitation.

If the skin and the rheophores are very moist, there are no longer observed either sparks, crepitation, or burning sensations; but there are manifested very variable phenomena of contractility or of sensibility, according as muscle, nerve, or osseous surface may be involved.

Hence he deduces the consequences that by induced currents electrical power in the skin is arrested at will; that without incision or puncture it may be traversed, and the action of the current may be limited to the organs which it covers, that is to say, to muscles, to nerves, and even to bones. M. Ducheune, in the application of his process, has used, successively, the electricity of machines, of the Leyden-jar, of the voltaic pile, and of the induction apparatus, as most resembling muscular electricity, this last being essentially medical, that is to say, it has been able to induce contraction in each of the muscles, singly or of their sheathes.

The following are the results which he obtained:

1st.—He regards as completely demonstrated, the utility of the electrical treatment applied to consecutive paralysis, traumatic lesions of nerves, and to the paralysis from fatty degeneration of infancy. He asserts that at the beginning of these diseases, the degree of the lesion may be recognized by the aid of the electrical contractility and sensibility of the paralyzed muscles.

2d.—Electricity is equally applicable, but with less certainty, to the paralyses termed spinal, and to those essentially rheumatismal or hysterical, according as they are more or less localized or generalized; but as these affections may be cured spontaneously, or disappear temporarily, the real value of the electrical treatment can not be determined.

3d.—Neuralgias, generally, with the exception of facial neuralgias, are cured by electro-cutaneous excitation.

4th.—Rheumatic muscular pains are rapidly cured by electrical treatment.

5th.—Cutaneous or muscular hyperæsthesia, and cutaneous anæsthesia of hysterical or saturnine origin are advantageously modified by electro-cutaneous excitation.

6th.—He has treated successfully, according to his own statement, local affections, such as paralysis of the seventh, of the third and of the sixth pairs, aphonia, deafness, paralysis of the bladder, and some cases of intestinal strangulation.

7th.—The application of electricity to chorea, to scrivener's palsy, of gout, and of amorosis, has produced results nearly negative. M. Mamias uses, ordinarily, a circular pile of cups formed of two hundred elements charged with salt water. The force of this pile diminishing rapidly, he replaced it by another, and this again by a third, in order to give time to the couples to be depolarized; this was the infancy of these piles. He is positive of having determined that by their use, the calorific or other effects which are inevitable with the cutaneous current piles used to-day, are avoided. The results obtained by him are the following:

1st.—Intermittent currents leave no durable impression upon the living body. Moderate shocks keep the nerves and muscles in exercise, and do not oppose vital reaction. Afflux of blood and increased nutrition follow repeated shocks.

2d.—If the shocks are excessively strong, but yet not sufficient to kill the animal, they leave no disease.

3d.—Continuous currents, too, prolonged produce disease.

4th.—He has recognized the influence of direction upon human nerves, which had been considered null.

5th.—He has determined the cases of paralysis in which the cure is complete, and those in which there is only amelioration, with intermittent currents which are preferable to others; he employs centrifugal currents in paralysis of motion, and centripetal in paralysis of sensation.

6th.—In neuralgias or neurosis there is no fixed rule;

sometimes it is necessary to employ continuous, and sometimes intermittent currents in one sense or another.

7th.—In affections of the vascular and lymphatic system continued currents are necessary, as opposed to affections of the nervous and muscular system, which need intermittent currents.

8th.—He has demonstrated, according to his own account, that the employment of electro-muscular contractility in order to find the seat and the nature of paralysis is an error. M. Poggioli uses exclusively static electricity in the treatment of disease as it was administered before the discovery of the pile, basing his opinions upon the theory of Franklin. He especially recommends electrified water for imbibition, and electric baths.

M. Tripier has presented a *Treatise on Electro-Therapeutics* in which he passes in review all the methods employed, and the results attained, which he seeks to explain by means of theories. He considers as original:

1st.—His reflections upon the action of induction currents according to their direction and intensity;

2d.—The use of excitors of different kinds, especially of charcoal;

3d.—The surgical indications of the galvano-caustic chemical method which he has applied to different pathological conditions;

4th.—The explanation of anæsthesia;

5th.—Experiments upon gustatory sensations induced by mediate or immediate galvanism of the tongue;

6th.—The cure of a certain number of diseases;

7th.—The treatment of hyperplasias of the connective tissues of contractile organs, especially of the uterfous and the prostate, etc.

M. Scoutetten presented to the concours a work having for its title *Electricity considered as the principal cause of the action of mineral waters upon the organism*, and in which he treats, from his stand-point:

1st.—Electrical action of mineral waters upon the exterior and the interior of the human body, whether taken in the form of bath or of drink.

2d.—Electricity of the blood of man and of living animals, and of the electrization of transported mineral waters.

In addition to this work M. Scoutetten presented special memoirs in which he has developed the different questions, out of which he has formed a body of doctrine.

M. Ciniselli presented a little treatise in which is set forth a synopsis of his investigations into chemical galvano-cautery, a method pointed out thirty years ago by one of your committee, and which he, also, in connection with M. Breschet, applied at l'Hotel Dieu, of Paris.

Chemical, is distinguished from thermal galvano-cautery in this regard, that the latter cauterizes by means of the heat produced in a metal wire traversed by an electrical current of a certain intensity, whilst the other effects cauterization by the aid of an acid or an alkali, separated from a solution by the chemical action of the current. He employs for this object either a simple circuit, or a circuit in which there is a pile. According to the direction of the current, he directs upon the diseased part an acid or alkaline caustic in the nascent state, and, consequently endowed with great energy. M. Ciniselli enumerates in his treatise the cases in which he effected cures by operating upon tumors of different kinds, in different pathological conditions. M. Nelaton, by the aid of similar methods, has removed nasopharyngean tumors. No one can fail to felicitate M. Ciniselli upon his efforts to apply electro-chemistry to therapeutics; and your committee, likewise, is pledged to persevere in the same direction.

Doctor Pitet has devoted himself to the establishment of a parallel between the physiological and pathological effects produced by interrupted and by continuous currents, and, to demonstrate the superiority of the therapeutic action due to the most feeble over that of the most energetic induced

currents. He has, moreover, arrived at this conclusion: that the best mode of application is that of continuous currents. The results of his investigations are succinctly subjoined:

Induced and continuous currents produce effects essentially different; the first tend to produce constantly a condition inverse to that which exists at the moment of their application; that is to say, their initial specific effect being constantly the same as the pathological condition which they destroy, from which it results that their therapeutic effect is inverse of the first.

Continuous currents, on the contrary, produce upon the affected organ the same effects which they induce in the physiological state, that is to say, a relaxation, a dilatation, etc.

According to his observations, energetic induced currents, applied in the physiological, as well as in the pathological condition, fatigue the subjects, and often aggravate the morbid state; they alter and destroy sensory and motor irritability, whilst continuous currents, on the contrary, are easily tolerated by the organism; they are employed advantageously in vascular congestions; their influence is such, that it should receive serious consideration in therapeutics.

M. Pitet relates a certain number of facts which he considers as demonstrating the principles just indicated.

No one can fail to approve the course of the author in studying, successively, the physiological action of electricity upon an organ in the normal state, and upon the same organ in a morbid condition. This is the true course to be pursued in order to arrive at a correct appreciation of the real therapeutic action of electricity.

M. Remak used piles with constant currents, and piles which have not this property. The results of these experiments are subjoined:

1st.—The continuous current, to a supportable degree, acts upon central organs, and induces, by reflex move-

ments, contractions, even in antagonistic groups of muscles.

2d.—The continuous current increases, within certain limits, the excitability of the nerve, instead of weakening it, and that, too, in the sensitive, as well as in the motor nerves.

3d.—He has affected the resolution of paralytic contractions by means of continuous currents. It is this process which, under favorable circumstances, heals paralysis for the treatment of which intermittent currents are prejudicial.

4th.—He has, likewise, cured old paralysis.

5th.—He has experimented upon patients affected with rheumatic contractions or pains; having transmitted, during about five minutes, a current of fifteen or twenty elements with sulphate of copper, through the muscles of the shoulder, the patient raised his arm, and placed it upon his head.

6th.—He next sought, without success, to discover if the continuous current of a certain force was not of a character to produce some disorder in the organism. The employment of interrupted currents only aided him in particular cases, and which are not even very frequent. If the results just indicated be compared it will be perceived that physicians are not in accord, either in the mode of treatment, or in the results attained.

Indeed, M. Duchenne employs, with success, intermittent currents in the majority of cases, treatment which M. Remak rejects as hurtful, giving the preference to continuous currents. M. Namias pretends to demonstrate that the electric diagnostic of M. Duchenne for the recognition of the seat of paralysis is false. This last does not recognize in man the hypoanæsthetic (?) properties of continuous currents.

M. Remak, and to some extent M. Pitet, asserts that the continuous current increases within certain limits the excitability of the nerve in place of weakening it. It is this

property which has suggested its employment in the treatment of paralysis, in preference to the induced current. It must be added that M. Hifflesheim considered the intermittent current as an excitant and the continuous as a sedative. It should be observed that the hyposthenic action of continuous currents appeared to be very generally recognized, and that physiologists admit that with feeble currents directed successively in inverse manner, there is but very slight hyposthenic action, whilst, when the currents are very intense, this action becomes predominant.

These divergences, as well as others which might be cited, in the results obtained and in the opinions expressed upon the value of this or that proceeding demonstrate the impossibility of deciding, as yet, upon the true therapeutic properties of electricity, whether continuous or intermittent currents are employed, especially when the treatment has not been followed up.

One of two things is certain; either electricity acts effectively, or its action is negative. Upon the first hypothesis it must be concluded that physicians have not experimented under the same conditions of age, of constitution, of vital force, of equal degree of disease, and with electrical appliances having the same intensity; for if every thing had been similar on every hand, there would have been no reasons for not obtaining the same results. Upon the second hypothesis, it would be necessary to admit that nature has done every thing. We are borne to the conclusion, invariably, that the applications have not been made under the same conditions, for it could not be denied that electricity would have acted efficaciously in certain paralyses and other pathological conditions; numerous examples, already old are at hand to sustain it.

IV.—Observations and Conclusions.

We ask of the Academy permission to present to it some observations, which will not be without utility for therapeutic applications.

Continuous currents and interrupted currents have each their mode of action; the former, by the aid of moistened electrodes, penetrate under the skin into the organs, and produce there effects physical, chemical, calorific, and, perhaps, of transportation, effects dependant upon the intensity of the current and of the conducting power of the parts which they traverse. These parts are, muscles, nerves, their organic elements, vessels, all tissues, etc., between which, the current divides itself in proportion to the conducting power of parties which do not form a homogeneous entity as a metallic conductor; there are branchings, anastomoses, contacts more or less immediate, from which result resistances, light shocks from changes of conductors, which may be only slight shiverings; special actions upon nerves and upon the muscles, of which we have already spoken; effects of heat produced by obstacles to its passage; perhaps chemical effects upon changes of conductors.

Have all these effects in the course of the electro-physiological investigations upon animals, effects which are interesting to know, been analyzed?

The effects of heat may be studied with great precision by the aid of thermo-electric needles; neither chemical effects nor effects of transportation have, as yet, been determined. Moreover, is it not well known, that threads of metal, a bad conductor, such as platinum, are traversed by intense currents?

Who can say that similar effects are not manifested in nerve-fibres, muscle-fibres, capillary-vessels, etc.

All these effects may exercise an influence upon organic functions; upon this point investigation is necessary. It is necessary, moreover, according to the example of M. Namias, in his electro-physiological experiments upon animals, to observe, after their death, what have been the effects produced upon organs, according as continuous or intermittent currents of given intensity have been employed, in order to make their application to man.

Intermittent currents, independently of the physiological effects already mentioned, produce, likewise, heat, during the successive discharges, as has been demonstrated by discharging a Leyden-jar through a metallic wire, and effects of distension as is seen by passing the charge of a Leyden-jar into a thin tube of glass of small diameter, which flies into fragments; these questions must be examined when it is intended to treat the subject scientifically, whilst investigating the therapeutic effects of electricity; it is thus seen how complex is the action of electricity upon organs.

When the general considerations which precede the memoirs and works presented to the commission are reviewed; it is easy to be convinced that the experimenters formed no just idea of the mode of disengagement of electricity in the apparatus which they used. These apparata comprise ordinary electrical machines, voltaic piles with constant currents, electro-magnetic and magneto-electric machines, whose forms and arrangements are very varied. The effects resulting from electricity disengaged during chemical actions is no longer sufficiently considered.

Electricity, whatever may be the source which disengages it, is always of the same nature; it differs from one source to another only by its tension, its quantity, and the duration of its passage. In the pile the tension of the electricity is, in general, weak at the two poles, but it produces energetic physical effects, by reason of the quantity of electricity which passes in the circuit when it is closed.

On the other hand, at the instant of closing the circuit of the pile with a metallic wire, the electric current which traverses this wire produces in it another, by induction, (extra current) proceeding in an inverse manner; this current, whose duration is very short, and may, perhaps, be considered almost instantaneous, tends to diminish, even at the instant of its closure, the intensity of the induction current; upon opening the circuit, there is generated another induced current, directed in the manner of the induction

current, which has the same character as the discharges from the Leyden-jar.

Induced currents generated by voltaic currents, or in wires kept apart, differ amongst themselves in intensity, according to the force of the pile, and the length of the wires. They have a peculiar character, whilst in the discharges there are two instantaneous currents directed in an inverse manner, and acting as alternate currents.

Electro-magnetic or magneto-electric apparatus can be constructed only with the object to facilitate the application of electricity by intermittent currents; the effects which they produce differ between themselves only by the intensity of the discharges; it is even possible to obtain similar effects with Leyden-jars which are discharged and recharged more or less rapidly. There are, therefore, special effects relative to the apparatus determined only by the circumstances of the intensity of the duration and of the succession of the discharges.

In general, sufficient importance is not attached to the physiological effects which may be produced by electricity disengaged by the contact of liquids in organized bodies. When two different liquids, conductors of electricity, are in contact, they place themselves always in two different electrical states, whether there should be a chemical reaction between the two, or only a simple admixture; the one acting as the acid liberating positive, and the other egative electricity. These two electricities remain in the static condition so long as the liquids do not form a closed circuit by means of a solid conducting body not permeable. In the static state, the tension of the electricity is so feeble that very sensitive instruments are necessary for its detection. There is, moreover, a recombination of the two electricities in proportion as they become free, even upon the contiguous surfaces, so long as the chemical action or he mixture continues; it is then impossible to perceive how this electricity could exercise any action upon the internal

organs, especially from the administration of mineral waters. If these waters are alkaline, in reacting upon the acid secretion which covers the skin, they assume negative, and the secretion positive electricity; the recompositon of the two electricities is effected upon the skin, and the internal organs can experience no effect therefrom.

In the second case, when the circuit is closed by means of a metal, electro-chemical effects are, doubtless, produced; but are there, in the organs of men or animals, conductors suitable for forming closed circuits? What are the solid parts, conductors and non-permeable, which could determine the circulation of electricity disengaged by the contact of liquids during their mixture or when they may react chemically upon each other? None such are known; for there are only the tissues which separate the liquids, and by the intermediation of which the reactions are effected; deprived of these liquids they are not conductors.

It is not sufficient to base a physiological theory upon a fundamental fact. It is necessary to begin by demonstrating this fact.

For the present, the existence of electrical currents in the organs of living man, currents due solely to the reaction of liquids, independently of the employment of metallic conductors, is negatively demonstrated.

EDITORIAL.

Cancer Curers.

An esteemed professional friend in Indiana transmits to us the following note, from an inquiring patient, which contains its own moral:

Sir:—My wife is afflicted with a cancer on her left side, pretty well up under the arm. She has been under the treatment of a "cancer quack" at

Chicago for three months, but he has finally given up her case, after receiving a large sum of money from me to warrant a cure. He applied a salve, which eat a great hole in her side; he now refuses to apply the salve to the part affected, on the ground, I believe, that it is too near an artery. I have been advised to write to you, and inquire whether you can do any thing for her.

Please let me know early, as time is precious. Yours Truly, etc.

The Western News Company.

A few days since was opened in Chicago one of the most extensive and costly-fitted-up Book Stores in the United States. We refer to the Western News Company, 121 and 123 State street, John R. Walsh, Manager. The new quarters of this enterprising company embrace two store fronts. On entering, one is impressed with the richness and beauty of the appointments of this spacious store.

On either side are ranged beautifully carved and adorned book-cases of walnut and chestnut. The style is the pointed or early Gothic, surmounted by pinnacles, the arrangement being so artistic and consummate as to render the whole a series of complete book-cases, of construction and style as elaborate and expensive as any to be found in the private library of the wealhiest book lover. Each set of cases is surmounted by a hooded cornice of walnut, relieved by a groundwork of chestnut, with Gothic mouldings, open quartrefoil tracery above, and a pointed pinnacle surmounting each division. In front of each pilaster is placed a solid walnut column finished with carved capitals. Midway of the store on each side, is placed a gothic niche which forms a perfect division or line of demarkation between the elaborate ornamentation which prevails in the front half, the retail portion of the establishment, and the plainer, though exquisitely beautiful style which finds appropriate place iu the wholesale department. These dividing niches stand out in relief past the cases, each being tipped with a pointed gothic hood supported by four walnut columns with carved capitals, and resting upon solid octagon pedestals. The hood is surmounted by carved finial, with open quatrefoil tracery on the ridge.

We have not space to enter into the details of the various departments, but all are arranged in fine taste and convenient for the transaction of business.

In connection with books, rich and rare, from all quarters, an immense trade is done in newspapers and periodlcals, with news dealers all over the country.

Mr. John R. Walsh, in fifteen years in Chicago, has risen from obscurity to be the manager of one of the most extensive businesses in the country. We invite all to call and see his beautiful store.

LOOT.

Poisoning by Atropia.

The *Am. Jour. of Pharmacy* reports the result of the trial of Mademoiselle J., at Geneva, Switzerland, for poisoning seven persons with atropia, administered to them as *kirschenswasser*, while they were under her care as nurse. Notwithstanding the plea of insanity, for which the circumstances furnished strong ground, she was sentenced to penal servitude.

Extirpation of Lachrymal Gland.

Dr. A. D. Williams, of Cincinnati, has successfully extirpated the lachrymal gland, in a case of imperforate canaliculi, and recommends the operation in such cases, but opposes the recommendation of Lawrence and others to remove the gland in ordinary cases of obstructed nasal duct.—*Cinn. Lancet and Observer.*

Spurious Vaccination.

Dr. B. Rormer, of Kanawha Salings, W. Virginia, reports to the same journal a synopsis of four hundred and fifty-seven cases of spurious vaccinnation; constituting, perhaps, the most comprehenslve condensed

Opium Culture.

Mr. W. P. Creecy, of Vicksburg, Miss., reports to the same journal the failure of his experiments in the culture of the poppy, but suggests a continuation of the experiments in the South.

Note.—There is no doubt of the practicability of cultivating Opium in some portions of the South, as the writer has tested experimentally in Florida, by using the inspissated juice of the common poppy, which was found to possess similar properties to the opium of commerce. The experiments were, of course, upon a very small scale. Repeated attempts to induce germination in imported seed failed, inducing the belief in the correctness of the commonly received opinion that the capsules were baked before exportation, in order to prevent germination. W. H.

Anatomy.

The Legislature of the State of Maine has indefinitely postponed the bill for the legalization of the study of anatomy. It is one of the most remarkakle inconsistencies of an enlightened (?) age, that society should require the possession of certain knowledge by certain of its members, and withhold, under penalty, the only means whereby such knowledge can be acquired.

The same journal contains a formula for the preparation of carbolic acid plaster, to be used as an antiseptic dressing for wounds. We give it viz.:

Olive oil, 12 parts (by measure).

Litharge, (finely ground) 12 parts (by weight).

Beeswax, 3 parts (by weight).

Crystallized carbolic acid, 2½ parts (by weight).

Heat half the olive oil over a slow fire, then add the litharge gradually, stirring constantly until the mass becomes thick or a little stiff; then add the other half of the oil, stirring as before, till it becomes again thick. Then add the wax gradually, till the liquid again thickens. Remove from the fire, add the acid, stirring briskly till thoroughly mixed. Cover up close and set aside, to allow the residual litharge to settle; then pour off the fluid and spread upon calico to the proper thickness. If kept in a well-fitting tin cannister it will retain its virtues for any length of time. Another form of antiseptic plaster is the following:

Shellac, 3 parts.

Crystallized Carbolic Acid, 1 part.

Heat the lac, with about one-third of the carbolic acid, over a slow fire, till the lac is completely melted; then remove from the fire and add the remainder of the acid, and stir briskly till the ingredients are thoroughly mixed. Strain through muslin, and when sufficiently cooled spread to the thickness of one-fiftieth of an inch; after, brush over theplaster with a solution of gutta percha in a solution of bisulphide of carbon.

BOOKS RECEIVED.

THE STRUCTURAL LESIONS OF THE SKIN: Their Pathology and Treatment. Illustrated. By HOWARD F. DAMON, A.M., M.D., Fellow of the Massachusetts Medical Society, etc., etc. Philadelphia: J. B. Lippincott & Co., 1869. Pp. 255.

A very acceptable and interesting contribution to the scientific history of this important class of diseases. We cordially commend it to our readers.

DESCRIPTIVE CATALOGUE OF THE PATHOLOGICAL MUSEUM OF THE PENNSYLVANIA HOSPITAL. By WILLIAM PEPPER, M.D., Physician to the Philadelphia Hospital, Curator and Pathologist to the Pennsylvania Hospital, etc., etc. Philadelphia: Published by the Board of Managers. For sale by Lindsay & Blakiston, 25 South Sixth Street, Philadelphia. Pp. 138.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. GAILLARD THOMAS, M.D., Professor of Obstetrics and the Diseases of Women and Children in the College of Physicians and Surgeons, New York, etc., etc., with two hundred and twenty-five Illustrations. SECOND EDITION, Revised and Improved. Philadelphia: Henry C. Lea, 1869. Pp. 647.

The favor in which this book is held by the Profession is evinced by the exhaustion of the first edition (a very large one), within six months from its publication; a well-deserved success.

PAMPHLETS RECEIVED.

SUPPLEMENT TO THE REPORT OF THE BOARD OF TRUSTEES OF THE MICHIGAN ASYLUM FOR THE INSANE, for the years 1867-8.

THE PART TAKEN BY NATURE AND TIME IN THE CURE OF DISEASES.

REPORT ON OBSTETRICS, read before the State Medical Society, session of 1868, by ABRAM SAGER, M.D.

THE INTERMARRIAGE OF RELATIONS, by NATHAN ALLEN, M.D.

ON THE TREATMENT OF PARALYSIS BY ELECTRIZATION, with an Explantion of a new galvainc apparatus, by A. D. ROCKWELL, M. D.

HALF YEARLY COMPENDIUM OF MEDICAL SCIENCE. Part 3d. January, 1869.

THE
CHICAGO MEDICAL JOURNAL.

Vol. XXVII.—MAY 15, 1869.—No. 10.

REVIEWS.

Monthly Review of Medical and General Science in France and Europe.

Before entering on our subject we think it advisable to make a few preliminary observations with respect to the programme which we intend to follow.

As your journal is intended especially for the members of the medical profession, we shall devote our principal attention to medical, surgical and pharmaceutical subjects. As the medical body is the only recognized authority on general scientific subjects among the non-professional public, and as it is to physicians that people look for accurate information with regard to facts announced in the non-scientific press, we shall notice all the events in connection with general science which we think worthy of record. We shall abstain as much as possible from criticism, and try to submit facts to the judgment of our readers in such a manner as to enable them to draw their own conclusions.

This much said we commence our review.

An important paper has just been read before the Impe-

rial Academy of Medicine, by Dr. Dupré, Professor of Clinical Surgery at the college at Montpelier. Dr. Dupré divides pleurisitic effusions into three principal orders:

1st. Essentially inflammatory flowings, namely, those which accompany true pleurisies or which succeed them.

2d. Serous accumulations, actual dropsies which occur in the pleura in connection with organic lesions or general deteriorations.

3d. Rheumatismal or sero-plastic effusions. These last are the principal subjects of the paper.

Inflammatory flowings, according to Dr. Dupré, should not be combated by thoracic puncture. In the majority of cases, it might almost be said always to yield to other treatment. Serous accumulations in the pleura can be removed by no other means than puncture. Every thing tends to prove this, as well as the nature of the extravasated serum and its incessant tendency to accumulate, to the great danger of the lesions which have given rise to the extravasion. Rheumatismal or sero-plastic effusions require puncture of the pleura and the evacuations of this extravasated fluid, for these operations are calculated to obviate serious accident, and add nothing to the danger of the situation. Under the name of rheumatismal and sero-plastic effusions, which have been so well described by Mr. Pidaux under the name of latent pleurisy, and which have been so frequently observed by Michel Levy, Tholasan, Lancerotte and Toussagrioes.

The most important accompaniments of these effusions are the following: The beginning is generally accompanied by a slight trembling and a painful feeling of constraint in a part of the thorax. Sometimes, immediately afterwards pains in the joints, or sciatic neuralgia ensue. In other cases the pain in the thorax is very acute, and seriously impedes respiration, but it is superficial and not confined to any particular region, and posseses all the symptoms of pleurodynia, and of rheumatism of the pectoral

muscles. It often happens that in the course of this painful state, and frequently when its intensity is decreasing, an overflow of fluid which may or may not become considerable takes place in one of the pleural cavities. This effusion is unaccompanied by cough, oppression or pain. There is no fever, the appetite is unimpaired and sleep uninterrupted. However, a livid paleness, an abnormal motion of the face and neck, sudden interruptions of the breathing in the middle of deep inspirations, and irregular pulse, indicate the existence of the affection. In such cases medical treatment is uncertain in its results, tardy in its effects, and often allows the formation of dangerous lesions. Sudden death not unfrequently occurs. Dr. Dupré advocates puncture in these cases as a certain means of preventing lesions, without adding in any way to the gravity of the disease. After giving the statistics of the operation of thoracic puncture, which we append, Dr. Dupré resumes his conclusions as follows:

1st. There exist idiopathic pleuritic effusions, of which apyrexia, latency and progression are the ordinary characteristics.

2d. They are distinguished from inflammatory effusions, and from hydropic accumulations by the clinical characteristics which make them approach rheumatisms.

3d. The presence of elastic serosity in the pleura, and its prolonged stay there, is a real and considerable danger. It should be removed as promptly as possible, either indirectly by the aid of the medicine, or directly by surgical means.

4th. Thoracic puncture, practiced according to the rules prescribed, is absolutely harmless, and its immediate action and direct effects expose the patient to no danger.

5th. It should be practiced immediately in case of effusions of more than a fortnight's standing, especially those which are situated on the left side, and occupy all the pleural cavity.

6th. In cases where effusions form under the care of a

physician, recourse should not be had to this operation before the tenth day, and when they occupy at least two-thirds of the pleural cavity.

These principles put into practice by Dr. Dupré have produced the following results:

Patients operated on in the Second Week, 47.....	Cures,	46.
	Deaths,	1.
		47.

Where it was impossible to perform the operation at an early period of the disease, the results were not so favorable.

Patients operated in the First Month, 19.....	Cures,	15
	Deaths,	4
		19
" " " 2d " 8.....	Cures,	5
	Deaths,	3
		8
" " " 5th " 1.....	Cures,	1
" " " 17th " 1.....	Cures,	1

This table proves that sero-plastic effusions of very old standing can be cured, and that prompt thoracic puncture is an excellent habitual mode of treatment. The aid of medicine should not, however, be despised. On the contrary, we must rely on it to prepare and assure the success of the operation.

The frequent accidents resulting from the inhalation of chloroform have prompted from their very origin the study of several experimental chemists. Jobert de Lamballe, Robert, Abeille and Siégeoris have written on the happy results of electricity applied as a means of restoring persons asphyxiated by chloroform. With the same object Messrs. Legros and Onimus have experimented on the employment of continuous currents of electricity.

The works of these two last authors have been submitted to the Imperial Society of Surgery. We think that a résumé of the experiments made before a committee of this society, and of the conclusions to which the gentlemen chosen by it to report on this subject have appended the authority of their reputations, will be read with interest.

Three white rats were placed under a bell glass thirty centimetres in height and fifteen in breadth, with a sponge on which a quantity of chloroform had been poured.

The first rat was removed after respiration had entirely ceased, when every trace of sensibility and voluntary movement had disappeared, but before the pulsations of the heart had discontinued. The poles of a voltaic pile were then introduced, one, the negative, into the rectum; the other, the positive into the mouth. The current was maintained during some seconds, after which the wires were withdrawn. In a little while irregular respiratory movements could be perceived, which gradually became more frequent; the pulsations of the heart increased in strength, and gradually sensibility and general movement returned. The animal was completely restored to life.

The second rat was taken from under the bell-glass almost in the same conditions, the movements of the heart being, however, less perceptible. The current failed to restore the animal to life.

The third rat, when taken from under the glass, had ceased to breathe; sensibility and general movements were extinguished; the pulsations of the heart were still perceptible. The application of the current succeeded in reviving it. It is important to observe that all these experiments are applicable to cases of asphyxia by chloroform, and not syncope.

As a means of combating chloroformic asphyxia, galvanization, as proposed by Messrs. Legros and Onimus, appears to the committee to be decidedly efficacious. The animals on which the preceding experiments were made may be

considered as devoted to certain death, if left to themselves.

The observations made by Mr. Maurice Perrin on dogs, cats and rabbits prove that animals asphyxiated by chloroform, in these conditions, succumb, if abandoned to the efforts of nature.

The preceding experiments are, we believe, of very serious importance, and calculated to render valuable services to surgical practice. One very important item should be remarked, that the continued current recommended by Messrs. Legros and Onimus only restores the action of the heart when it is made to pass through the cerebro-spinal axis.

The committee next proceeded to experiment upon inductive currents, and obtained as satisfactory results as with the voltaic pile. This fact induced the committee to give the preference to the last; firstly, because an inductive apparatus can be easily procured and is portable; secondly, because induced currents applied to the human heart, diaphragm, and phrenic nerves have received the sanction of experience, while continuous currents, applied to the same organs in the similar cases have not succeeded in producing the same results. Indeed, Friedberg, of Berlin, and Wide, of Hargrave, have successfully employed faradization of the phrenic nerves. Maurice, of the Royal Berg Hospital, has saved a man by passing a current through the elongated ganglion in communication with the epigsatrium. Luimssen and Duchesse de Boulogne restored to life a man who had asphyxiated himself with the vapor of charcoal, by means of faradisation of the epigastrium. Whatever may be thought of previous experiments and of the probable advantages of inductive electricity, Messrs. Legros and Onimus must be allowed the credit of having placed at the disposal of practitioners a new and very efficacious means of combating one of the gravest accidents of a preliminary to surgical operations, for which they cannot be too completely prepared.

Since chemical matches have come into general use, poisoning by arsenic, which formerly occurred so frequently, seldom comes under our notice. But the fatal facility of procuring phosphorus has, unfortunately, enabled guilty persons to replace it with advantage to their purpose. Criminal statistics prove that this substance is that most frequently employed in poisoning. Up to the present, medical science possessed no antidote to this poison, and its victims were fatally devoted to death.

M. Personne, a distinguished chemist, who has been long investigating this subject, has at length discovered an antidote to the disorganizing agent. Knowing, already, that essence of turpentine and other carburets of hydrogen deprive phosphorus of its property of becoming luminous in the darkness, and of burning at a low temperature, knowing that in the match manufactories at Stafford, in England, the workmen are protected from the necrosis resulting from the vapor of phosphorus by carrying a small phial of essence of turpentine attached to their breasts, M. Personne undertook a series of experiments which we detail for the benefit of your readers.

The experiments were fifteen in number, and were made in parallel series of three, on dogs of a middling size, and chosen, as much as possible, of the same strength. No. 1 of each series was given phosphorus alone. No. 2 was given the essence two hours after the poison. No. 3 received the antidote immediately after the injection of the phosphorus.

The essence and phosphorus were, in each case, conveyed to the stomach of the animal by means of an æsophageal catheter—the phosphorus always in a state of solution in a fatty substance. In one case it was administered in the shape of the paste used for making matches. The dose varied from one to three decigrammes.

No. 1 of each series, to which phosphorus alone had been given, making, in the five series, five animals, died.

Numbers 2, those animals to whom the antidote had been administered two hours after the injection of the poison, at first exhibited the same symptoms as the animals which had been given the poison alone, but finally, after copious discharges from the stomach, recovered, with one exception.

Numbers 3, finally, to which the antidote had been administered immediately after the poison, were only slightly indisposed, with the exception of one, which succumbed.

The animals belonging to series 2 and 3, which died, had absorbed 30 centigrammes of phosphorus, an enormous dose. In addition they had been placed in a temperature so cold as to freeze the water put at their disposal. Finally, notwithstanding the large quantity of phosphorus injected the antidote was administered in the same amount as in the other cases. Phosphorus kills by depriving the blood of the necessary oxygen, thus preventing its hæmatosis.

Essence of turpentine appears to possess the property, when absorbed, of preventing phosphorus from burning in the blood, as it prevents its combustion at a low temperatuae. The results of these experiments we regard as highly satisfactory, inasmuch as they give us a means of paralyzing the action of this poison, and finally eliminating it from the blood.

Some time ago M. Barbosa, of Lisbon, recommended sulphuret of potassium as a remedy for the croup. Dr. Labat and several other French physicians tried it without much success, notwithstanding the striking results which M. Barbosa had experienced in its employment. Dr. Labat had tried sulphuret of potassium as an expectorant, to combat the dry cough, which is so dangerous a stage in the disease. Not obtaining from this specific the results which he expected in the case of a little girl two years of age, Dr. Labat administered acetate of potash, which can be given in a large dose, and possesses the advantage of not having a strong flavor. He prescribed this salt in doses of 10

grammes dissolved in 120 grammes of water, to be taken by table spoonfuls every half hour. Three hours of this treatment produced an abundant expectoration, but, in this particular case, the secretion becoming purulent, the child succumbed. Convinced, however, that he had found a medicine capable of producing an abundant mucous expectoration, Dr. Labat administered acetate of potash with proportions of 8 grammes to 120 grammes of water to a child of 18 months, in which the cough had assumed an alarming dryness, twenty-four hours after tracheotomy. The following day, mucous expectorations had re-appeared, and the child recovered, after a treatment of 16 grammes of acetate of potash. Since this last case acetate of potash has been several times used under similar circumstances, notably, by Dr. Dudson, of St. Andrew's Hospital, at Bordeaux, and always with marked success.

Dr. Secorizat, physician to the Trans-Atlantic Navigation Company, has just published a remedy which he considers infallible for sea-sickness. It consists of faradization of the epigastric region, accompanied by the external use of a solution of atropine.

During the first day he does not attempt to arrest vomiting, when its frequency does not pass the limit natural to the temperament of the patient.

Experience has proved that if these evacuations are suddenly stopped at the commencement the result is an obstinate constipation. However, as soon as sea-sickness passes the limits of an ordinary indisposition, means of combating it should be at once sought. Especially in the case of persons of an extremely nervous temperament, as convulsions of a very grave nature might ensue.

When the illness assumes a serious character, Dr. Secorizat recommends friction of the epigastric region with a cloth dipped in water which may have a little soap dissolved

in it; then, when this region is completely cleared of all greasy matter he uses the following lotion:

Sulphate of Atropine, 2 or 3 centigrammes.
Water, 30 grammes.

He afterwards applies a copper plate of four or five centimetres in diameter, in communication with one of the poles of a Rumkorff's Medical Aid within five or six centimetres of the navel in an upward and outward direction; the other meter, furnished with a wet sponge, is then moved from the hollow of the epigastrum to the plate, following the direction of the curves of the stomach. Five or six applications on each side generally suffice. These should be made as near as possible to the costal cartilage, without, however, touching them. The intensity of the current should be graduated according to the susceptibility of the patient, and the violence of the vomiting. It is sometimes advisable to use a small metallic pencil, instead of the plates, in order an energetic rubefaction and an efficacious revulsion. Since 1865, when Dr. Secorizat commenced these experiments he has had an opportunity of repeating them in several hundred cases, on persons of both sexes and of every social position. His success has been nearly always prompt and decisive.

Perhaps the means employed by Dr. Secorizat may be equally well adapted for checking vomiting peculiar to pregnancy, but in this case the physician should give the utmost attention to the effect of electricity on the general condition of the mother and child.

General Science.

The deplorable accident which occurred a short time ago in the Place de la Sorbonne, was, as our readers are probably aware, caused by an explosion of a quantity of powder destined to charge sub-marine torpedoes. Since that occur-

rence public attention, in France, has been intensely interested in the causes which brought it about, and the proper measures to be adopted to prevent the recurrence of similar accidents. The general press has given currency to the most erroneous reports of the origin of the explosion, and it is to set the matter right before the public, or at least, before that part of it best capable of judging of the matter, that we occupy your readers' attention with this subject. The non-scientific press universally stated that the accident was due to the spontaneous ignition of picrate of potash, a salt, according to their reports, which can scarcely be touched or heated without exploding instantly. This is a grave error which it is of moment to rectify, for we are persuaded that in no remote future, the picrates are destined to play an important part in industry. Picrate of potash is by no means the terrible salt represented. It can be struck or heated to 300 degrees without exploding. This fact is so well established that Mr. Designolle, inventor of a new powder, into the composition of which picrate of potash enters, has been anthorized to conduct his experiments in the Bouchet Powder Manufactory, one of the most important government mills. If the substance were as dangerous as the general press represents it, it is very unlikely that Mr. Designolle would have obtained this privilege. The quality which has so lately called attention to this salt of potash, is that it produces, when ignited, a large quantity of gas, and consequently possesses an enormous bursting power. To render its combustion complete, however, it must be mixed with nitrate or chlorate of potash, which burn the nascent carbon contained by the picric acid.

With nitrate of potash the combustion of the picrate is is slow, but nevertheless complete, a fact which permits its use as constituent of an ordinary gunpowder, which is much stronger than that composed of sulphur, charcoal and nitre. With chlorate of potash combustion is complete and instantaneous. So combined picrate of potash becomes

an explosive powder absolutely unfit for fire arms, but excellent as a charge for bombs, and, above all, for the marine torpedoes. The instantaneous explosion of the mixture of picrate and chlorate of potash, a substance which, alone, can be hammered, and even pulverized in an iron mortar, with a pestle of seventy kilogrammes, as we have seen ourselves a hundred times. Chlorate of potash in combination with any organic substance, such as sugar or gum, is very easily exploded. It will be easily understood, then, that when mixed with an active substance such as picrate of potash, it becomes a very sensitive composition.

It is thus to the chlorate, and not to the picrate, of potash, that the mixture of these substances owes its peculiar susceptibility to explode, but it is the picrate which gives it the really fearful bursting power which it possesses.

EDITORIAL NOTES.

We published, in No. 3 (Feb. 1st.) of the JOURNAL, a translation of the splendid generalization of Dr. Rabuteau, termed, by him, the *Thermic Law*, and its application to the *biatomic metalloids*. Dr. Rabuteau has extended his investigations upon this subject to the *monoatomic metalloids*. This law, as applied by Dr. Rabuteau to the former group of bodies, and determining for them a therapeutic activity in direct ratio to their atomic weights, or, what is the same thing, in the inverse ratio to their specific heat, had been already applied to certain of the latter, by Bouchardat and Stuart Cooper, who discovered that chlorine is more active than bromine, and the latter than iodine. M. Rabuteau has demonstrated that fluorine satisfies this law, for the fluorides are the most active of all the monoatomic metalloid compounds. He has determined, moreover, that the fluor-

ides are not so dangerous as had been imagined, for one grain of the fluoride of sodium having been injected into the veins of a dog, produced only transitory effects, consisting in a very marked febrile reaction and abundant salivation. M. Rabuteau having taken twenty-five centigrammes of fluoride of sodium, experienced only slight epigastric uneasiness. The insoluble fluorides, such as those of calcium of zinc or lead are inoffensive. The fluoride of barium, a slightly soluble salt, is poisonous, not on account of the fluorine which it contains, but of the barium, which is poisonous. The fluoride of strontium is much less active than the preceding salt. The most dangerous compounds of fluorine examined by the author are those of silver, and of hydrogen (hydro-fluoric acid). These compounds are painful caustics and the cicatrization of the part to which they are applied ensues only at the end of three weeks.

We shall take occasion, hereafter, to refer to the author's observations upon the compounds of iodine, bromine and chlorine, which, at this moment, possess peculiar interest for practical men, in view of their increasing popularity and extensive application as therapeutic agents.

The investigations of M. Hermann into the chemical composition of muscle, and the chemical modification which muscular fibre undergoes during contraction, have induced him to give to the electrical phenomena which take place in nerves and muscles, an interpretation based solely upon the chemical changes which take place in these tissues.

M. Hermann asserts that muscle in its normal state always contains a certain very complete nitrogenous substance dissolved in the muscular plasma. This subtance, called *inogene*, may be decomposed and form a new product, amongst other carbonic acid, sarcolactic acid, and an albuminoid body, which is separated first under a gelatine form, and which subsequently becomes solid, forming myosine.

* Etude expérimentatale sur les effets physiologiques des fluorures et des composes metalliques en general. Paris, 1857.—*German Balliere.*

This decomposition of inogene occurs spontaneously but very slowly in the state of rest; it occurs immediately under the influence of excitants of muscular contractility. The active state of muscle is due exactly to this rapid decomposition of inogene, and this substance once exhausted, muscular activity is no longer possible.

This substance has not yet been isolated, because the least chemical manipulation decomposes it. Regarding its composition it may be placed by the side of hæmato-globuline, for during decomposition only they both afford an albuminoid substance.

In nerves there should be an analogous substance, which should undergo decomposition with equal rapidity, but without occasioning the formation of myosine. From these chemical data M. Hermann establishes the two following principles:

1st. If in a nervous or muscular fibre, there are points at which the decomposition of this fundamental substance occurs more rapidly than at others; the former possess, relatively to the latter, negative electricity, and the currents will be so much the stronger as the difference in decomposition is greater.

2d. The decomposition which occurs in nerves and muscles is as much more slow during the active state of these tissues, as it is more rapid during the state of repose.

The first proposition serves to explain why muscular currents are formed between the horizontal surface of a muscle or of a nerve and its artificial transverse surface, for the portion denuded and exposed to the air exhibits a rapidity of decomposition greater than the portion intact; so the transverse section is negative by relation to the longitudinal section, which is positive.

M. Hermann asserts another general fact, that, of uninjured muscles the smaller extremity is negative in comparison to the larger. But of the sartorius muscle the inferior is positive, although smaller than the superior, which is

negative. The same is true of the semi-membranosus, whose least voluminous extremity is positive. These conclusions of M. Hermann are contested by M. DuBois-Reymond, and the discussion between these two prominent authorities is criticised by M. Onimus in Robin's *Jour de l'Anatomie et de la Physiol.*

M. Legros and Onimus having concluded a very extensive series of experimental investigations into the subject of the movements of the intestine, submit the following conclusions:

Inspiration and expiration induce in the intestine changes of tension which vary with the mode of respiration.

The movements proper to the intestine are of three sorts: 1st. the peristaltic movement, which is normal; 2d. the antiperistaltic movement; 3d. contraction.

Every peristaltic movement is characterized by an abrupt contraction, followed by a distension of longer duration.

Isolated peristaltic movements may occur in a restricted portion of the intestinal tract. After a series of contractions there is generally a period of prolonged repose.

Contractions are most frequent in the upper portion of the intestinal canal. We have never observed more than eighteen of them per minute.

The contractions of the large intestine differ from those of the small by their amplitude, their duration and their form.

The diagram of the act of defacation is entirely special, and suggests that obtained after poisoning with strychnia. The movements of the stomach have not the regularity of those of the intestine. They are of two sorts according as they are observed at the pyloris or at the great cul-de-sac.

The antiperistaltic movement does not combine with the peristaltic.

The peristaltic movement is due to the action of the nervous cells of the intestinal walls upon the smooth fibres.

These cells may themselves undergo the influence of the caliac plexus and of the cerebro-spinal centres.

Arrest of the arterial circulation augments or determines peristaltic contractions. Arrest of the venous circulation induces no analogous effects.

This pathological condition cannot serve to explain normal movements.

Induction currents applied directly to the insestines cause contraction at the level of the poles; between the poles there is relaxation of the walls.

Continuous currents prevent peristaltic movements, and induce a diminution of tension if the current follows the normal direction of the movements, or an augmentation, if the currents pass in the opposite direction. Electrization of the spinal cord by continuous currents augments, perceptibly, the peristaltic contractions at the moment of their application.

Induction currents upon the splanchnic nerves augment, progressively, the tension, without determining peristaltic movements.

Continuous currents upon the splanchnic nerves occasion peristaltic contractions. Electricity directed upon the nervous plexi and upon the mesenteric nerves produces analogous effects.

Interrupted currents upon the pneumogastric cause dilatation and immobility of the intestine. This phenomenon occurs through reflex action. They induce, on the contrary, directly, contraction of the stomach.

Continuous currents, directed upon the pneumogastric, act but little upon the intestine. They arrest normal or pathological contractions of the stomach.

Direct excitation of the intestine, by pinching or otherwise, induces, at the first instant, distention followed by energetic contraction.

Ice-water arrests peristaltic movements, inducing contraction; hot water intensifies them.

Water holding in solution chloride of sodium, increases the energy of the movements.

Croton-oil determines contraction, in addition to those for the expulsion of matters; ipecacuanha acts in an analogous manner.

Saline purgatives do not increase the energy of the contractions.

Atropine, in weak doses, increases the peristaltic movements, but in strong doses abolishes them.

Morphine retards the contractions without abolishing them.

Strychnia, in poisonous doses, determines spasmodic contractions, when there are general convulsions.

From a review in Robin's *Journal de l'Anatomie et dex Animaux* of recent experimental investigations upon the innervation of the sphincters of the anus and bladder, by Professor Masius (Belgium), it appears that M. Masius, in 1867, demonstrated that the spinal cord cut at the level of the intervertebral disk which separates the sixth and seventh lumbar vertebræ, induced in rabbits a relaxation of the sphincter and a loss of its reflex contractility; and, likewise, that by destroying the spinal cord immediately anterior to this point, and at different distances from it, the sphincter ani, far from relaxing, remains contracted, and even more strongly, and also manifests more vigorous reflex contractility; he has, likewise, determined that a section made below the disk aforesaid induces inverse effects. He has hence concluded the existence in rabbits of a centre (ano-spinal centre) placed in the cord at a point corresponding to union of the sixth and seventh lumbar vertebræ. He has assigned to it the function of controlling the tonic as well as the reflex contraction of the sphincter muscle of the anus. We admit that inhibitory (empêchantes) fibres reach this centre, since the section of those fibres which unite it with the cerebral nervous system increases the tonic and reflex contractions of the sphincter.

Since the publication of this memoir he has extended his experiments to dogs.

It results from these new experiments:

1st. That there exists, in the spinal cord of dogs a centre (ano-spinal centre) situated about the level of the middle and lower third of the fifth lumbar vertebra.

2d. That this centre controls, as in rabbits, the tonic and reflex contractions of the sphincter ani.

3d. That inhibitory or intercepting fibres reach this ano-spinal centre, since every section made in advance of this exaggerates the tonic and reflex contractions.

These experiments prove, likewise, that the ano-spinal centre of dogs is placed higher, that is to say, more in advance than the same centre in rabbits, in which it is located at the level of the intervertebral disk of the sixth and seventh lumbar vertebræ.

It should be remarked that the spinal cord is relatively shorter in dogs than in rabbits; in the former it ceases at the union of the seventh lumbar and the first sacral vertebra. It might then be supposed that in man, in whom the spinal cord is prolonged only to the end of the first lumbar vertebra, if there be an ano-spinal centre it must be situated in the dorsal region. Moreover, this seems demonstrated by an observation reported by M. Gluge. He detected, as a consequence of a fracture of the vertebral column in the region of the sixth dorsal vertebra, relaxation, and loss of tonicity of the sphincter ani, but, likewise, the preservation during a month, of the reflex mobility of this muscle.

These observations warrant the inference, as M. Schwann, our illustrious master, asserts, that there exist, in man, two separate centers: one controlling the tonic, the other the reflex movement of the sphincter ani. But, as may have been perceived, from the investigations referred to above, it has always been observed, as well in rabbits as in dogs, that the same restricted portion of the cord holds under its control both the reflex and tonic mobility of the orbicular

muscle of the anus. Hence the observations of M. Gluge appear insufficient to prove the existence, in man, of two separate centers.

Important investigations have been made, recently, to determine the influence of the nervous system upon the bladder. *Budge attempted to demonstrate that the cerebral peduncles furnished motor fibres to the bladder, fibres which traverse the anterior columns of the cord, and the third and fourth sacral nerves. These fibres transmit voluntary impulses to the bladder. A second source of motor fibres, disconnected with the act of volition, exists in the lumbar portion of the cord. Giannuzzi and Budge determined, by experiments made upon dogs, that two principal points of the spinal cord control the contractions of the bladder; one corresponding to the third and the other to the fifth lumbar vertebra.

The fibres which separate from the spinal cord, at the level of the these lumbar vertebra, pass by the cord, and the mesenteric ganglia of the great sympathetic, to reach the hypogastric plexus.

The fibres which originate at the fifth lumbar vertebra reach the hypogastric plexus directly by the sacral nerves. The sensory nerves of the bladder, which transmit reflex excitation to the spinal cord, are contained in the hypogastric plexus; they reach the spinal cord through the anastomotic branches of this plexus, with the trunk of the lumbar sympathetic, by communicating branches which unite this last with the cord, and, lastly, by the posterior lumbar roots.

This much was known of the action of the nervous system upon the bladder. From the experiments which M. Masias has made upon this subject, he thinks the following conclusions may be drawn:

---

*Constatts Jahresbericht über die Leistungen in den Physiologischen Wissenschaften in Jahre, 1864. S. 237.

1st. Every section of the spinal cord made above the ano-spinal center, induces an exaggeration of the persistent contraction of the sphincter vesicæ.

2d. Every section performed a little lower induces a relaxation of this muscle.

3d. The tonic and the reflex motility of the sphincter are under the control of the same portion of the cord, which is situated, in rabbits, at the union of the middle with the lower third of the seventh lumbar vertebra; and in dogs, on a level with the lower portion of the fifth lumbar vertebra.

4th. Another center (vesico-spinal) must be admitted, below the ano-spinal center, (*) which, although very near the first is perfectly distinct from it.

Before concluding, the author adds, the analogy existing between these two centers ano-spinal and vesico-spinal ought to be indicated: the first controls the tonic and reflex contractility of the anal sphincter; the second regulates the tonic and reflex contractions of the sphincter of the bladder.

We have determined that inhibitory (empêchantes) fibres reach the anal center; and analogous fibres extend to the vesico spinal center, for, when the fibres which maintain the communication of this center with the cerebral system are cut, the tonic and reflex motility of the vesical spincter are augmented.

---

*The center termed here vesico-spinal must not be confounded with genito-spinal, of Budge; this last center regulates the involuntary contractions of the bladder; the first controls the tonic and reflex contractions of the sphincter of the bladder.—*Masius.*

COMMUNICATIONS.

BY N. SHERMAN, M.D.

PLYMOUTH, MARSHALL CO., IND., April 13, 1869.

CHICAGO MEDICAL JOURNAL:

By the politeness of Dr. J. D. Gray I witnessed the examtion of the body of Wm. Frantz, aged about twenty-five years. He was wounded in the U. S. service, in 1863, the ball entering at the lower portion of the ensiform cartilage and passing backwards and slightly upwards, making its exit on the same side just to the left of the spine. After the healing of the wound until April 5, 1869, his general health had been good. On that day, while making great exertion pulling at a rope, he was taken sick with severe pain in the stomach and vomiting. From that time until his death, eight days after, all medical aid gave no relief.

Autopsy.

Twenty-four hours after death. Drs. Gray, Baily and Lessley. Considerable emaciation, abdomen sunken, left side of the chest much enlarged, after opening the chest and abdomen. The stomach was found where the left lung should be, much enlarged and distended with fluids and gas, compressing the left lung into a very small space at the superior portion of the lung cavity, at the same time forcing the heart wholly to the right side of the sternum, posterior to the ensiform cartilage, and to the left, in the line of the gun-shot wound was an opening from one and one-half to two inches in diameter, through the diaphragm. Through this opening the stomach proper, the large omentum and intestine were unmistakably strangulated, while the stomach

except slight traces of inflammation, appeared quite healthy.

The thickened, smooth condition of the edges of the opening in the diaphragm clearly indicates that the opening had existed since the time of his wound. He had been, during the greater portion of the time for the past five years, actively engaged at hard labor, without suffering any pain or considerable inconvenience. That the passage of the stomach omentum and intestine through the opening in the diaphragm, compressing the lung, was recent, was evident from the fact that the lung was partially inflated to its normal condition.

Three Cases of Trichnasis in Clay Co., Illinois.

BY E. W. BOYLES, M. D., OF CLAY CITY, ILL.

A family by the name of Stafford, consisting of the mother and three daughters, moved into this county about the first of March last. They had formerly lived in Edgwood, in the adjoining county of Effingham. Shortly after coming into this county the three daughters, aged respectively six, twelve and sixteen years, were taken sick; they first complained of weakness, soreness and tenderness of muscles, stiffness of the limbs, which increased till the two oldest were soon prostrated. There was, also, considerable gastric derangement present, and fever of a low form with decided exacerbations, in the evening ensued.

Dr. Anderson, of this county, was called in, and diagnosed the disease *trichinasis*, (i e) he said if it was not that he did not know what it was. Dr. Duncan was called in consultation, and subsequently Drs. Green and McKee, of Louisville. They all arrived at the same conclusion, that the disease was *trichinasis*.

In about a fortnight from the time of attack, the girl aged twelve years died; a postmortem was held, at which the Doctors mentioned above, and Dr. J. W. Hitchcock, of Louisville, in this county, officiated, but having no glass of any considerable power, no satisfactory conclusions were arrived at. Dr. Hitchcock removed a portion of the biceps muscle of the left arm, and sent it to me for microscopical examination. Upon placing a small portion under the glass the parasites *trichina spiralis* were to be seen in great numbers. I tried several specimens and never failed to find them in great abundance; they were of various sizes, but none encysted. I then enclosed a small portion of the muscle in a letter, and sent it to Dr. J. Adams Allen, of Chicago, requesting him to examine it with the microscope and report to me the results. I did not state to him that I had made any examination of it myself. In a few days I received a letter from Walter Hay, M. D., of Chicago, from which I make the following extracts: "Your letter of the 13th inst. was handed to me yesterday by Dr. Allen, with the request that I would examine the specimen enclosed and favor him with my opinion of its condition. * * * I can assure you that I have never seen any specimen which even approximated to this in the number of parasites. * * * After measuring a cubic tenth of an inch (.1) and dividing this again into eight (8) portions, I counted in one of these eights forty-five trichina, all free, none encysted."

The circumstances connected with the cases, as I learned then of Drs. Anderson, Hitchcock and McKee, are these: The mother is an invalid, and previous to their moving into this county they bought pork of a grocer in Edgewood, and the elder sister states that frequently when she went to cook the meat (cured ham,) she would slice off small bits of it and eat it raw, and that she gave some to the younger sister, and they ate of it in the same way; the sister that died being particularly fond of it ate more than she or the

younger sister; the younger sister ate but little, and she was only slightly affected with the disease, the mother never ate any of the meat raw and never had the disease.

The oldest sister is still living, but is in a very precarious condition. It is stated that the grocer bought his pork in Chicago.

Super-Oxygenation.

Editor Chicago Medical Journal:

Gentlemen:—In his remarks on Nitrous Oxide, in the March number of your excellent journal, Dr. S. S. Wallihan does me great injustice in stating that "experimenting with it for dental purposes," I "also administered it tentatively" in various disorders, and that my "deductions were, of course, entirely empirical; at least" I "made no attempt to elucidate the *rationale* of its action." Now, on the contrary, my investigations were more directly in the interest of general medicine, were based upon deductive reasoning, and conducted with a view to demonstrate the medical properties and *rationale* of protoxide of nitrogen. Indeed, special attention was given to this latter, in order to prove the safety and value of nitrous oxide as a sanative agent.

This misrepresentation is the more unjust as it is evident that Dr. Wallihan is mainly indebted to my publications for his knowledge of the medical properties and applications of nitrous oxide, while his observations are only confirmatory of those long since made by myself.

As this statement is due, both to me and the cause of science, I request its insertion in your next issue.

Respectfully, yours,

Geo. J. Ziegler, M.D.

Philadelphia, April 8, 1869.

EDITORIAL.

The publication of the CHICAGO MEDICAL JOURNAL having passed into the hands of the subscriber, all payments for subscription and accounts, either past or future, must be made to me, unless otherwise directed. Subscribers who have neglected to pay their subscriptions on volumes previous to the present year must remit at an early day or the publisher will be compelled to discontinue sending them the JOURNAL.

The editorial management will remain as heretofore, in the hands of Dr. J. Adams Allen, assisted by Dr. W. Hay, and to whom communications in his department should be addressed.

J. WOOLCOTT, HOOKER,
Room 12, Union Building.

CHICAGO, May 1st.

The following communication explains itself, and we take much pleasure in publishing to the professional world these evidences of *esprit de corps* and progress in its young members. Deprived of the fostering care extended to it by paternal governments in older civilizations, the development of the science and art of medicine devolves upon its own students, and the alumni of the Chicago Medical College have manifested a most praiseworthy spirit in putting forth, so early in their professional career, this effort to encourage each other in well doing. W. H.

Prize of the Alumni Association of the Chicago Medical College.

This is a prize of one hundred dollars, to be awarded for the best essay on some medical or surgical topic. The subject of the essay is left to the option of the competitor.

The prize is open for competition to all the members of the Association good on the Secretary's books. Every alumnus of the Chicago Medical College is earnestly urged to become a member of the Association by sending his name and one dollar to the Secretary. The Committee on Competing Essays consist of N. S. Davis, M.D., E. Andrews, M.D., H. A. Johnson, M.D., and Walter Hay, M.D. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the regular annual meeting of the Association, also, at the annual Commencement of the College in March, 1870. The competing essay must be sent to the Secretary of the Association on or before the 15th Feb., 1870.

It is expected that the prize essay, and others of marked value, will be published in pamphlet form, and furnished to members of the Association.

S. A. M. Williams, Sec'y and Treas'r,
166 State St., Chicago, Ill.

Board of Health.

With the beginning of last month (April) the Chicago Board of Health commenced a new era of its existence; the two commissioners appointed at the organization of the Board for the short term of two years, being rotated out of office by the expiration of their term, giving place to two appointed for the full term of six years. The board and the public are to be congratulated upon the re-appointment of one of the old members, Mr. Wm. Giles, to whose intelligence and efficiency we can bear positive testimony. Dr. Schlœtzer, the other appointee, has had the opportunity to add to his professional and scientific acquirements, a thor-

ough familiarity with the practical operations of the Department, having been connected with it since its organization. The Board, as re-organized, has testified its appreciation of the late Sanitary Superintendent, Dr. Jno. H. Rauch, by re-electing him to fill that position, with an increase of compensation commensurate with their appreciation of his value, and now, let us hope the "new brooms will sweep clean," for while much has been done already, the work of sanitary reform is only begun. A little less circumlocution and a little more direct action would greatly enhance the efficiency of the Department.

Craniotomy vs. Forceps.

In a recent discussion upon this subject, before the St. Louis Medical Society, Dr. Boisliniere characterized craniotomy as "a relic of barbarian midwifery," asserting that it was demonstrated by statistics to be almost as fatal to the mother as the Cæsarian Section (the proportion of fatal cases in the former being 1 to $2\frac{3}{4}$, and in the latter 1 to 3, without any hope for the child). An analysis of the opinions apparently the most diverse and opposite demonstrated a growing sentiment in favor of the more frequent and earlier use of the forceps.

PROCEEDINGS OF SOCIETIES.

Minnesota State Medical Society.

About two years before Minnesota became a State, that is, in December, 1855, a State Medical Society was organized in St. Paul, by adopting a Constitution and By-Laws, and the election of the following officers:

President—Dr. THOS. R. POTTER.

Vice President—Dr. J. H. MURPHY.

Recording Secretary—Dr. J. V. WREN.
Corresponding Secretary—Dr. J. D. GOODRICH.
Treasurer—Dr. DAVID DAY.
Censors—Drs. W. H. MORTON, F. R. SMITH, J. H. STEWART, A. E. JOHNSON and A. E. AMES.

Two subsequent meetings were held, the last being at St. Anthony, in 1857. After that period the Society was allowed to languish. The rebellion broke out, and a large number of its members entered the service, and hence no meetings were held until a call was issued, signed by some of its members and others, for a Convention of Physicians at St. Paul, on the 2d of February, 1869.

Dr. J. H. Murphy, the Vice President of the Society, called the meeting to order, and Dr. D. W. Hand was chosen temporary Secretary.

Dr. A. E. Ames, on behalf of the Censors, proposed the names of forty physicians as duly qualified for membership. They were all accepted.

After some desultory discussion concerning the revival of the old Society or the organization of a new one, it was, by unanimous consent, resolved to re-organize.

The following physicians were recommended, and elected officers of the new Society, for the ensuing year:

President—Dr. SAMUEL WILLY, St. Paul.
Vice President—Dr. A. E. AMES, Minneapolis.
Corresponding Secretary—Dr. A. WHARTON, St. Paul.
Recording Secretary—Dr. E. J. DAVIS, Mankato.
Treasurer—Dr. S. B. SHEARDOWN, Stockton.
Censors—Drs. J. H. MURPHY, St. Paul; N. R. HILL, Minneapolis; W W. MAYO, Rochester; A. C. WEDGE, ALBERT LEA and J. C. RHODES, Stillwater.

The first Tuesday in February was the time chosen for holding the annual meeting, and St. Paul selected as the place.

Dr. O. H. Howitt, of Red Wing, was appointed to read an essay at the next annual meeting.

The Society is, also, to hold semi-annual meetings, in different localities throughout the State, and the first of these meetings is to be held at Owatonna, on the 16th of June. The following programme was accepted as the order of exercises at the next semi-annual meeting.

2 P. M.—Essay by Dr. Kimball, Minneapolis; subject, Rheumatism. Dr. Wharton, St. Paul, and A. B. Stewart, Winona, to introduce the discussion of the subject.

3 P. M.—Subject, Quacking; its Diagnosis and Treatment. Dr. Mattocks, St. Paul, and Dr. C. H. Hewitt, Red Wing, to introduce the discussion of the subject.

7. P. M.—Address by Vice President, and discussion of the subject by the members present.

Drs. J. H. Murphy, St. Paul; C. H. Hewitt, Red Wing, and S. B. Sheardown, Stockton, were appointed delegates to the United States Medical Association.

E. J. Davis, Rec. Secretary.

Mankato, Minn., April 15, 1869.

De Witt County Medical Society.

The society met in annual session at the office of Drs. Goodbrake & Edmiston, in the City of Clinton.

The President, Dr. J. A. Edmiston, in the Chair.

Minutes of last meeting read and approved.

Dr. W. G. Cochran, of Farmer City, was proposed for membership, and elected.

Officers for the ensuing year: President, Dr. John Wright; Vice President, Dr. J. W. Edmiston; Treasurer, Dr. C. Goobrake; Secretary, Dr. Edmiston; Censors, Drs. W. G. Cochran, C. Goodbrake, J. H. Tyler.

Dr. Wright, in a neat speech, returned thanks for the honor conferred upon him.

The retiring President, Dr. A. Edmiston, asked until next regular meeting to complete his annual address, which was, on motion, granted.

Drs. C. Goodbrake and John Wright were elected delegates to the American Medical Association, for the next year; and Drs. C. Goodbrake, J. Wright, and B. S. Lewis, were elected delegates to the Illinois Medical Society, with power to designate alternates in case of inability to attend.

Various subjects were brought before the meeting and discussed at length.

Drs. W. G. Cochran and J. H. Tyler were appointed essayists.

On motion, the Secretary was instructed to furnish copies of proceedings to the Clinton papers and Chicago Medical Journals, for publication.

On motion, adjourned until next regular meeting.

John A. Edmiston, *Sec'y.*

ORIGINAL COMMUNICATIONS.

Leavenworth, April 10, 1869.

Dr. J. Adams Allen:

Dear Sir:—A person, calling himself Dr. M. F. Turner, is traveling through Kansas with a letter, purporting to have been written by yourself, recommending him to the good offices of medical men.

The letter looks like a forgery to me, and I am certain that the person, though a cripple, is unworthy of the aid he is asking. If you will inform me, if the letter is not genuine, I will put the medical men of the State upon their guard against the man. Very truly, yours,

C. A. Logan.

Ann Arbor, Mich., March 28, 1869.

Dr. J. A. Allen:

Dear Sir:—J. W. Shipton, M.D., class of 1867-8, of Rush Medical College, died in Detroit, March 19, 1869.

He was on his way from Florida to his home in Elizabeth, Ill., when he was taken suddenly worse, and died in about four hours. He had been South for the benefit of his lungs.

You may receive more particulars from other sources, but thought I would communicate the fact, as no one else might do so.

Yours, etc.,

J. T. Scovell, Class 1867-8, R. M. C.

LOOT.

Chestnut Leaves in Hooping Cough.

Dr. J. Ludlow communicates to the Cinn. *Lancet and Observer* the successful results of his treatment of hooping-cough with infusion of chestnut leaves—half-ounce to the pint of boiling water, subsequently diluted with a pint of cold water, sweetened and administered *ad libitum.*

Obscure Cases of Sudden Death.

Wooster Beach, Jr., M.D., writes to the *Medical Record:*

Many physicians, and particularly those who make post-mortem examinations for coroners, will frequently meet with cases of sudden death, I might say *instantaneous* death, for which they can discover no satisfactory cause, neither in the symptoms immediately preceding it, nor in the appearance of the body on autopsy. An individual, man, woman, or child, without a premonition of any kind, suddenly

utters an exclamation of surprise, perhaps of pain, or it may be, entirely without warning, sinks to the earth. Those near him hasten to his assistance, and find him either entirely dead, or drawing his last breath. In some instances the premonitory symptoms are slightly more marked, or of greater duration, but are not such as to point to the solution of the manner of death. A post mortem examination is made. The body has the external appearance of robust health. Every organ is carefully examined, and found to be in a perfect normal state, and the indications of health are as well marked in the interior as was the case in the exterior of the body. What is the cause of death?

The solution of this question is required, I estimate, in full fifteen per cent. of sudden, or, more properly, instantaneous deaths, and probably in a larger per centage. Without doubt, a great proportion of sudden deaths ascribed to valvular disease of the heart—to uræmia—to serous apoplexy, and to other causes, only occasionally proving suddenly fatal, really belong to this class of obscure causes under consideration. Physicians making examinations, unaware of the frequency of the existence of these causes, naturally ascribe death to a diseased condition, be it ever so slight, of almost any organ.

There are many cases of sudden death, the causes of which become easily apparent on autopsy, as many diseases of the heart, rupture of aneurisms, cerebral apoplexy, etc. I confine myself to those only in which nothing is found to explain the fatal termination; and it is these I designate "obscure cases of sudden death." Some few authors have given attention to this subject; yet it appears to me, without throwing much light upon it, or towards clearing up the mystery that surrounds it. The explanation that has been given in many of these cases, is certainly very unsatisfactory. Some of them I propose briefly to notice.

Fatty degeneration of the heart. Too many pathologists of note ascribe death to this disease to make it doubtful that it is a cause. This degeneration of the organ very frequently exists, yet death is seldom traced to it. Sudden deaths, at any rate, not occurring as a rule, in subjects with this affection, should make us exceedingly careful in

ascribing such deaths to it even when we find its existence well marked.

Other affections of the heart are, of course, very numerous, and I only allude to them to remark that death is undoubtedly referred to them when they are insufficient for its cause. Disease of the heart, according to vulgar and even learned opinion, has to answer for many deaths of which it is entirely innocent. Rheumatism of the heart has been mentioned as terminating suddenly in death, and leaving no traces to show its cause; but we know that rheumatism of the organ pursues a course which gives plain indications of its existence in life, and produces pathological changes easily recognized after death. Paralysis of the heart is said to be accountable for sudden death—but this is a mere hypothesis.

Embolism might explain deaths in some instances where the clot is so large as to considerably obstruct the heart's action—but obstruction to a single large vessel of the brain should not be sufficient explanation for death. No more serious results should follow a plug in such vessel, than stopping the flow of blood through it by a ligature.

Accumulation of flatus in the stomach—fatty degeneration of the diaphragm—engorgement of the lungs and congestion of the brain, have been given among other causes, but they fail to offer a satisfactory solution of this mode of death. As regards these two latter causes, I may state that it is not unusual to find hypothetic congestion of the lungs, strongly marked, and fullness of the cerebral vessels, but these I consider due to the fluidity of the blood—the blood being almost unexceptionably fluid in these as well as other cases of sudden death.

I have been actuated in bringing the attention of the profession to this subject, by the hope that some suggestion may be elicited as to what manner of inquiry should be adopted in studying this strange phenomenon. Although I have seen a large number of cases of this class, and have had the assistance of able pathologists in their investigation, I am entirely unable to say more in regard to the appearance found, than stated above: that the entire system has presented no deviation from sound health.

Yet some morbid change has taken place as completely and suddenly fatal as an extensive rupture of the heart, or a hemorrhagic effusion around the medulla oblongata.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JUNE 1, 1869.—No. 11.

REPORTS OF MEDICAL SOCIETIES.

American Medical Association—Annual Session for 1869.

[We are indebted to PROF. E. S. GAILLARD, of the *Richmond & Louisville Medical Journal*, for the appended succinct account of the doings of the "The Medical Congress" at New Orleans.]

LIST OF OFFICERS OF THE ASSOCIATION.

The following is the list of officers of the Association for 1869:

President—Wm. O. Baldwin, M. D., Montgomery, Ala.

Vice Presidents—George Mendenhall, M. D., Cincinnati, O.; Noble Young, M. D., Washington D. C.; N. P. Moore, M. D., Portland, Maine; S. M. Bemiss, M. D., New Orleans, La.

Permanent Secretary—Wm. B. Atkinson, M. D., Philadelphia.

Assistant Secretary—A. J. Semmes, M. D., Savannah, Ga.

Treasurer—Caspar Wistar, M. D., Philadelphia.

The officers of the Association are elected annually, on the recommendation of a nominating committee, composed of one from each State delegation represented, and one from the Medical Staff of the Army and Navy. The individuals so recommended are, on motion, elected by the Association before each annual adjournment. The officers of the present year were elected at the meeting of the Association held last May in Washington City.

PROCEEDINGS OF THE OPENING DAY.

The American Medical Association met in the Mechanics' Institute, at 11 A. M.

The President, Dr. W. O. Baldwin, of Alabama, occupied the chair, assisted by Vice Presidents Drs. George Mendenhall, of Ohio, and S. M. Bemiss, of Louisiana.

The Permanent Secretary, Dr. W. B. Atkinson, of Pennsylvania, and Assistant Secretary, Dr. A. J. Semmes, of Georgia, were present.

The President invited to seats on the platform Drs. Warren Stone and A. Lopez, of New Orleans, and ex-Presidents H. F. Askew, of Delaware, N. S. Davis, of Illinois, and Alden March, of New York.

The session was opened with prayer by Rev. Mr. Gallaher, of New Orleans.

Dr. T. G. Richardson, of Louisiana, chairman of the Committee of Arrangements, welcomed the delegates to the city in an eloquent address.

The President then delivered the annual address.

Letters were read by the Permanent Secretary from Drs. S. D. Gross, of Pennsylvania, W. Byard and W. Canniff, of Canada, and R. A. Kinloch, chairman of the Medical Society of South Carolina, expressing regret at their inability to be present on this occasion.

On motion of Dr. Mussey, it was resolved that each State Medical Society be requesed to prepare an Annual Register of all the regular practitioners of medicine in their respective States, giving the name of the colleges in which

they may have graduated, and date of diploma or license.

Special reports of committees were then made as follows:

On Devising a Plan for the Relief of the Widows and Orphans of Medical Men, Dr. H. Griscom, New York, chairman, reported, which was referred to the Committee on Publication.

On Veterinary Colleges, Dr. Thomas Antisell, District of Columbia, chairman, reported progress and was continued.

On Specialities in Medicine, and the Propriety of Specialists Advertising, Dr. E. Lloyd Howard, Maryland, chairman, reported and made the special order for Wednesday at 12 M.

On Library of American Medical Works, Dr. J. M. Toner, District of Columbia, chairman, reported, and was, on motion of Dr. Davis, made special order for Wednesday at 1 P. M.

On the Best Method of Treatment for the DifferentForms of Cleft Palate,—Dr. J. R. Whitehead, N. Y., chairman. Reported and referred to section on Surgery.

On Rank of Medical Men in the Navy—Dr. N. S. Davis, Illinois, chairman, announced that their last year's report was final, and committee was discharged.

The report on Medical Ethics by Dr. D. Francis Condie, Pennsylvania, chairman, was read by Dr. Davis and adopted.

On American Medical Necrology—Dr. C. C. Cox, Maryland, chairman, reported progress, and was continued on motion of Dr. Davis. Dr. Cox was authorized to fill all vacancies on his committee.

Voluntary communications were presented by Dr. Jos. Tones, of Louisiana, on Mollities Ossium, and referred to section on Surgery.

A. Sayre. Referred to section on Hygiene. On Cases of Lead Palsy from use of Cosmetics, by Dr.. L.

On the Physiology and Chemistry of Longevity, by Dr. Cutler, of Mississippi. Referred to section on Hygiene.

On the Protective and Preventive uses of Quinine, by Dr. S. Rogers, of New York. Referred to section on practical Medicine.

On the Tongue in Malarious Diseases, by Dr. Osborn, of Alabama. Referred to section on Practical Medicine.

On the Warm Cerebro-spinal Bath in the Treatment of congenital apnœa, and on a new method of artificial respiration, by E. D. McDaniel, of Alabama. Referred to section on Practical Medicine.

Reports on Climatology and Epidemics were received from Drs. Thomas, of New York; T. J. Heard, of Texas; F. W. Hatch, of California; E. A. Hildreth, of West Virginia, which were referred to the section on Climatology and epidemics.

On motion of Dr. Davis, the report on the revision of the plan of organization was made the special order for Wednesday, at 10 A. M.

Near the hour of adjournment to-day Dr. Eve suggested that the many papers on education, ready to be offered, be laid before the Association on the next morning at 9 o'clock.

Dr. Davis, of Chicago, moved that all such papers be referred to a special committee of five.

Dr. Eve seconded this motion, which being carried, the President appointed Drs. Davis, of Illinois; P. F. Eve, of Tennessee; E. S. Gaillard, of Kentucky; E. Lee Jones, of New York; and J. K. Bartlett, of Wisconsin.

On motion adjourned until Wednesday at 9 A. M.

The special feature of this day's proceedings was the delivery of the President's address, which was universally commended and admired.

SECOND DAY'S PROCEEDINGS.

The attendance yesterday was much larger than on the first day. A number of arrivals had increased the *person-*

nel of the Association to near three hundred. The hall was well filled, and the same dignified deportment which had marked the deliberations of the members on the opening day was displayed on the second day. Much of the facility with which the deliberations were conducted yesterday, and the promptness with which action was taken upon the various resolutions, was, undoubtedly, due to the tact and practical administrative knowlege displayed by President Baldwin.

At 9 A. M. Dr. W. O. Baldwin, the President, in the chair, called the meeting to order.

A paper on "Canula and the New Mode of Applying Ligatures" was submitted by Dr. P. F. Eve (Tenn.), and was referred to the Section on Surgery.

Dr. J. M. Bush, of Kentucky, offered the following resolution:

Resolved, That a committee of five members be appointed by the chair, to take into consideration the subjects alluded to in the President's address, and report at this meeting.

This resolution having been adopted, the President selected as members of the committee Dr. Parvin, of Indiana, chairman; Dr. Toner, of the District of Columbia; Dr. Pollock, of Pennsylvania; Dr. Welch, of Texas; Dr. Seely, of Alabama.

Dr. McPheeters, of Missouri, offered a communication from the Medical Association of that State, in reference to medical education.

On motion of Dr. Toner, District of Columbia, it was referred to the special committee on that subject.

Dr. Eve offered the minutes of the Medical Society of Tennessee, which was similarly referred.

Dr. Gaillard, of Kentucky, offered the following preamble and resolutions, which were refered to the same committee:

WHEREAS, The medical teachers of America have, after a trial of twenty-two years, failed to meet satisfactorily and

efficiently the requirements of the great body of the profession in regard to medical education; and

WHEREAS, The condition of the profession is yearly becoming more deplorable on account of the antagonistic and objectionable policy of medical schools, in making the amount of fees charged, rather than scientific teaching, the basis of competition; and

WHEREAS, To obtain professionally competent graduates, sound and efficient teachers are indispensably necessary; and

WHEREAS, Such teachers, to be found throughout the country, can not be induced to leave their homes without the assurance of competent remuneration; and

WHEREAS, Such remuneration can only be obtained by adequate fees charged, unless by a system of low fees the number of students be relied upon to make up the inevitable pecuniary deficiency; and

WHEREAS, Reliance upon numbers of students for this purpose deplorably crowds the already overcrowded professional field, diminishing thereby individual income, judgment, experience, and skill, thereby compelling practitioners to resort to other avocations as a source of supplemental income; and

WHEREAS, This devotion to other pursuits destroys opportunities for study and improvement, degrading thereby the status and standard of American physicians; and

WHEREAS, The schools of New England, New York, Pennsylvania, Maryland, Virginia, South Carolina, Georgia, Missouri, Tennessee, Louisiana, Alabama, and District of Columbia now charge comparatively remunerative fees; and

WHEREAS, The *low system* of fees is charged only in a few of the Middle States, and can with advantage be made to conform to the rate of fees charged elsewhere; and

WHEREAS, It is as unethical for colleges to underbid each other pecuniarily as it is for practitioners to do so;

Resolved, That hereafter no medical school in this country, other than those fully endowed, be entitled to representation in this Association, if the amount charged by such schools for a single course of regular lectures be less than one hundred and forty dollars.

Resolved, That all schools charging less than this sum are earnestly requesed by this association to advance their rates of fees to the amount mentioned.

The report of Dr. Lee, of New York, the delegate to the Association of Superintendents of Insane Asylums, was offered and referred to the Section of Psychology.

The report of Dr. Gross, of Pennsylvania, delegate to the Foreign Medical Association, was presented, together with the letter to Dr. Ehrenberg, was read and referred to the Committee of Publication.

The time having arrived for consideration of revision of plan of organization, it was, on motion, taken up.

A recess was taken to allow the selection of members of the Committee on Nominations.

On re-assembling, the permanent Secretary announced the following as the Committee on Nominations:

New York—J. C. Smith.
Delaware—H. F. Askew.
Pennsylvania—A. M. Pollock.
Kentucky—H. M. Skillman.
Tennessee—J. B. Lindsley.
Mississippi—W. Y. Gadbury.
Alabama—J. Cochran.
Ohio—Jno. Townsend.
Indiana—B. S. Woodworth.
Illinois—T. D. Fitch.
Wisconsin—H. Van Dusen.
Missouri—J. S. Moore.
Michigan—J. B. White.
Georgia—R. D. Arnold.
Louisiana—S. Logan.
Texas—S. M. Welch.
Minnesota—C. N. Hewes.
Arkansas—R. G. Jenning.
West Virginia—W. J. Bates.
Rhode Island—G. L. Collins.

District of Columbia—L. W. Ritchie.

United States Army—J. J. Woodward.

United States Navy—F. E. Potter.

Dr. Chaille, of Louisiana, submitted a proposition for a common medical nomenclature in the United States, taking as a model an official publication on the subject by the Royal College of Physicians, London, and offered the following resolutions, which were adopted:

Resolved, That a committee of five be appointed by the President, to report as soon as practicable to the present session of this association upon the following:

1. The propriety of adopting, and using its influence to have adopted by the entire medical profession in the United States, the provisional "Nomenclature of Diseases of the Royal College of Physicians."

2. On the practicability of having this nomenclature published in such manner as may render it easily and cheaply accessible to every member of the profession.

3. To recommend such other practical measures for the action of this association as may be necessary to introduce this nomenclature into official (military, naval, etc.) and general use.

The Chair appointed the following gentlemen as the committee: Drs. Woodward, U. S. A.; Houstis, of Alabama; F. G. Smith, of Pennsylvania, and Chaille, of Louisiana.

The reports of the Committee of Publication, and the Treasurer, were read, accepted, and referred to the Committee of Publication.

On motion, the Committee on Nominations were permitted to retire for consultation.

The special order for 12 being the report on Specialists, it was read by the Secretary, and, on motion of Dr. Sayre, the resolutions were adopted and the report referred to the Committee of Publication.

The large number of arrivals has increased the *personnel* of the Association to near four hundred.

Dr. L. P. Yandell, Jr., of Kentucky, introduced the following resolution:

Resolved, That private handbills addressed to the members of the medical profession, or advertisements in newspapers, calling the attention of professional brethren to themselves as specialists, be declared in violation of article — of section — of the Code of Ethics of the American Medical Association.

Dr. N. S. Davis, of Illinois, said it had been the practice to publish cards in medical journals for the purpose of informing the medical fraternity that the advertiser devotes himself to special diseases. These cards were not so much for the information of the public as for the medical fraternity. He hoped that, now the question was up, it would be discussed fully.

Dr. L. P. Yandell, of Kentucky—We have allowed physicians to violate the code of ethics by advertising in medical journals that they are specialists in the treatment of certain diseases. In Europe they are stricter in regard to specialists than here. There, where a physician wins a reputation in the treatment of certain diseases, his professional brethren send cases to him for treatment, but advertisement is prohibited. If we are allowed to resort to advertisements, not as a question of merit, but of money, this association should so declare. I am sure I am right in principle, and I want to get an expression from this association.

Dr. Sayre, of New York—Let those who understand the best mode of treatment in special diseases instruct their professional brethren through the proper channels, as the honorable way of preferment, not by advertising as a matter of dollars and cents. Let us look the matter square in the face, and sustain the resolution of Dr. Yandell. May my hand be paralyzed if I make any attempt to profit by advertising the knowledge I have attained in my profession.

Dr. Mussey, of Ohio, moved to amend by inserting, "or in medical journals."

This amendment was accepted.

Dr. Davis, of Illinois—The question before us is one to settle the interpretation of the existing statute. The ques-

tion is whether that rule of ethics shall be enforced, prohibiting publication of cards calling attention of individuals laboring under particular diseases.

Dr. Yandell stated that he had preferred charges against a practitioner of Louisville for advertising himself as a specialist in the newspapers, and for sending handbills to physicians, but that the medical societies of that city not having sustained him, he brought this subject up for the action of this association. The question is, shall we associate with professional prostitutes and medical outlaws?

Dr. Yandell's resolution was unanimously adopted.

The Committee on Prize Essays reported as follows—their report being adopted:

They have received but two essays—one upon "The Physiological Effects and Therapeutical Uses of Atropia and its Salts;" the other upon "Quinine as a Therapeutic agent." They agree to present both of these essays to the association, and to recommend the award of a prize of one hundred dollars to each of them.

S. M. Bemiss, *Chairman.*
C. Beard,
Joseph T. Scott,
S. A. Smith.

The Secretary broke the seals, and announced that Dr. S. S. Herrick, of New Orleans, was the author of the paper on Quinine, and Dr. Roberts Bartholow, of Cincinnati, was the author of that on Atropia.

Dr. Booth, of Mississippi, ofiered the following preamble and resolution:

Resolved, That the proper construction of art. 4, sec. 1, Code of Ethics, A. M. A., having been called for, relative to consultation with irregular practitioners who are graduates of regular schools.

Resolved, That said art. 4, sec. 1, Code of Ethics, A. M. A., excludes all such practitioners from recognition by the regular profession.

This resolution was unanimously adopted.

On motion, the Association adjourned until Thursday, at 9 A. M.

THIRD DAY, THURSDAY, MAY 6, 1869.

The proceedings of yesterday were undoubtedly the most important held since the opening of the session. The reports of special committees—some of them bearing upon questions vital to the interest of medical science—were read and appropriately acted upon. Among the ablest reports was that on President Baldwin's address, and one from the Committee on Medical Education. We give the former; but we regret that the great length of the latter prevents us from publishing, at this time, even a summary. We should judge that much was done yesterday toward defining clearly the position to be assumed during the coming year by the association. Many of the technical reports are of a high order of ability.

Dr. Baldwin, President, in the chair; Dr. S. M. Bemiss and Dr. Mendenhall, Vice Presidents.

Reading of the minutes was dispensed with.

On Dr. Parvin's report of Committee on President's Address, your committee desire to present the following report:

"We cannot refrain, before entering upon the consideration of the plan recommended by the President for the improvement of medical education, gladly expressing our high appreciation of the general tone of this address, of the broad and catholic spirit which pervades it, finding expression in earnest and eloquent words—in brief, we believe the address worthy the perusal of every member of the profession, in that it was worthy the memorable occasion, and is worthy of a place in the annals of medicine.

"On the other hand, we cannot refrain, with sadness be it said, from acknowledging the truth of the terrible allegations made against the present condition of medical education, and the little success attending the efforts for improvements in such connection, made during a score of years.

"The special recommendation made by the President is in these words:

"'I would advise that we appoint a committee of our wisest and best men to digest a plan for one or more National Medical Schools, and to memorialize Congress in behalf of the enterprise. Let the plan embrace as a basis the features presented by the Cincinnati Convention of Teachers; let these schools or universities confer such distinctions and privileges as will be proportionate to the superiority they demand, and such as will make the attainment of their diploma an object of the ambition of those who engage in the study of medicine; let the choice be open to all aspirants, and the appointment or election of professors so guarded as to secure the very highest talent, the most profound learning, with the most fully demonstrated capacity for teaching. Make the salaries of the professors large, and not to depend upon the number of students; and let the Federal Government assume a proper share of the expenses incurred.'

Your committee express their hearty approval of this general plan, but suggest that the effort at first should be for the establishment of but a single school, as more feasible, and beside, one such institution would be a model which other medical colleges might in time be induced to imitate in extent, duration and thoroughness of teaching, in rigidness of requirements for the degree of M. D.

"We likewise desire to say that when the details of this general plan are thrown into form, there should be the amplest security against the places and the power of such a medical college as designed, ever falling into the hands of politicians or the proteges of politicians. Medicine is higher than politics; broader than political creeds and party platforms.

"In conclusion, your committee reiterate the recommendation of the President as to the appointment of a committee for the special purposes referred to."

The President appointed this committee as follows: Dr. N. S. Davis, of Chicago; Dr. F. Gurney Smith, of Phila-

delphia; Dr. D. H. Storer, of Boston; Dr. E. S. Gaillard, of Louisville; Dr. Joseph Jones, of New Orleans.

On motion, Dr. W. O. Baldwin, of Montgomery, was added to the committee.

The President appointed as delegates to the British Medical Association:

Dr. N. Pinckney, U. S. N., R. R. McIlvain, Ohio, J. F. Hibberd, Indiana, B. Lindsey, D. C. G. C. Blackman, Ohio.

To the Canadian Association:

Dr. Alden March, Albany, N. Y.

Dr. Davis read report of meeting of editors, and presented the following from the Association of American Medical Editors:

To the American Medical Association: I have been instructed to announce to your honorable body, that those members of your association in attendance at this annual meeting, after proper consultation, have effected a permanent organization with the title of "The Association of American Medical Editors." The objects of this organization are the cultivation of friendly relations; mutual assistance; community of effort and views, where possible, in a system of receiving foreign exchanges, and sending our own journals abroad; concert of action in support of improvement in the present system of medical education, and of a higher standard of preliminary attainments for those who propose to enter upon the study of medicine; in proposing laws for the proper registration of births, marriages and deaths; in collecting the names of all the regular practitioners in the several States; and in promoting generally the value and efficiency of our periodical medical literature. The association thus formed is to hold its annual sessions on the day preceding the annual meetings of this body, and in the same localities. Dr. Mitchell, of New Orleans, is the Permanent Secretary, and Dr. J. B. Lindsley, of Nashville, Tenn., the Assistant Secretary. Congratulating your

honorable body on the establishment of another organized power within the ranks of your noble profession,

I remain yours, very truly,

N. S. Davis, Editor,

President of Association of American Medical Editors.

Referred to Committee on Publication.

In the case of a special violation of the code in Louisville, Kentucky, Dr. Gaillard desired to remove an unfortunate and incorrect impression created in the minds of the members of the Association by one of the delegates from Louisville (Dr. Yandell), in regard to a failure on the part of two medical societies in that city to meet promptly and fully and alleged breach of the code of ethics on the part of one of the members of these societies.

Dr. Gaillard stated that he was satisfied Dr. Yandell had no intention of creating a false impression in this connection. The gentleman against whom charges had been preferred was a German of professional proficiency, who recently arrived, and, ignorant of the code of ethics, had advertised himself as a specialist in the daily papers, and had sent private handbills to professional men. As soon as this gentleman was apprised of his fault, he had promptly withdrawn his advertisement from the daily papers and had ceased sending his handbills mentioned. The medical societies of Louisville decided that though there had been a breach in the letter of the code of ethics, the gentleman arraigned had no intention of doing what was professionally wrong. These societies, therefore, declined to expell the member against whom these charges had been preferred. Dr. Gaillard thought it due to those societies and to the gentleman offending, that this explanation should go upon the records.

[CONCLUDED NEXT MONTH.]

A VISITOR FROM NEW YORK.

Dr. Hiram Corliss, of Washington county, New York, a delegate from the New York Medical society to this convention, was formally presented to the delegates, and in response spoke briefly of the history and condition of the medical society represented by him.

OFFICERS.

The election of officers, which was next in order, was, on motion of Dr. N. S. Davis, of Chicago, temporarily postponed.

LETTERS

from Dr. Wright, of Chatham, and other gentlemen, unable to be present at the convention, were read.

PRACTICAL MEDICINE AND EPIDEMICS.

A report was then read from the committee on practical medicine and epidemics by Dr. E. P. Cook, of Mendota, the chairman. The committee premise their report with the statement that, in their search for information they had addressed printed circulars to physicians in every county in the state, but had only received three or four answers. For this reason the report of the committee would not be as full as might be desired. The report considered that in the large cities of the state, sufficient attention is perhaps devoted to the sanitary laws, though in almost all the communities there exists a necessity for a more accurate registration of births, deaths, and marriages. One fact of interest to the profession during the year was a marked change in the nature of the diseases from those that have prevailed during the same time for many years. In regard to the climatology, it was stated that the year had opened with an extended drought which, toward the middle, was followed by heavy rains, which in turn gave place to a season of very hot weather. During this heated term, cases of *coup de soleil* had been not unfrequent. In this regard the committee regretted the fact that the nature of and best immediate

remedies for this class of the causes of death had not received the attention of the profession that their importance demanded. Even the best authorities were divided in opinion upon the subject. The committee recommended the theme to the serious consideration of the convention.

Another point noticed in the report was the prevalence of malarious fevers, during the months of September and November. In the neighborhood of Princeton, a species of this class of fevers, described as typho-malarial, had been noticed in a marked form, and in the case of a large number of sufferers. The committee spoke at length of the diagnosis of the disease, as contrasted with ordinary typhoid and scorbutic fevers, and the best medical agents to be used.

The report, which closed with much valuable information, was then, on motion, accepted, and referred to the committee on publication.

ANNUAL ASSESSMENTS.

On motion, the annual assessments of the society were continued at $3.

TREASURER'S REPORT.

Dr. J. H. Hollister, the treasurer of the society, submitted his annual report, as follows:

Balance on hand, May, 1868	$ 43 39
Receipts from last annual	
Meeting at Quincy	146 00
Other receipts	45 00
Total	$234 39
Expenditures	172 68
Balance on hand	$ 61 71

The report was accepted and referred to the auditing committee.

EPIDEMICS.

A supplemental report upon the subject of practical medicine and epidemics was then read by Dr. D. L. Jewell, of Watseka, of the committee. The gentleman confined

his report chiefly to a sketch of the extent and nature of scarlet fever epidemic, which had characterized the past year, in the eastern portion of Iroquois county. The symptoms of several individual patients were described and commented upon, and the remedies employed stated. Dr. Jewell, however, read his paper so indistinctly that it was very difficult for any one not in his immediate vicinity to hear the nature of his remarks. The epidemic he noticed in Iroquois county commenced in the month of February, 1868, and rapidly spread throughout the district.

The report was, on motion, received and referred to the committee on publication.

A VISIT TO THE HOSPITALS.

On motion, the convention resolved to visit the several medical colleges and hospitals, from which invitations had been received, as a society, the time of the visits to be determined upon by the committee of arrangements.

AN INVITATION.

An invitation was extended to the delegates, by Dr. N. S. Davis, to visit him, with their wives, at his residence on Wabash avenue, this evening, at 8 o'clock.

AUDITING COMMITTEE.

On motion, each county represented in the convention, was authorized to select one member, for the purpose of forming a committee for the nomination of officers.

The society then adjourned until 3 o'clock in the afternoon.

AFTERNOON SESSION.

The second session of the society was commenced at 3 o'clock in the afternoon, pursuant to adjournment, the president in the chair.

PERMANENT MEMBERS.

On motion, Dr. S. J. Jones, of Chicago; Dr. Peter Eppler, of Cayuga; Dr. D. B. Trimble, of Chicago; Dr. John B. Hamilton, of Jerseyville, Dr. R. D. Bradley, of Blooming-

ton and Dr. John Rauch, of Chicago, were elected permanent members of the association.

OBSTETRIES.

Dr. H. B. Buck, Springfield, chairman of the committee on obstetrics, read an extensive and, to the profession, highly interesting report. The gentleman strongly urged the necessity of not only considerable professional knowlege, but long practical experience on the part of the practitioner, in order to allow him to practice this important branch of the profession with safety and success. He warmly advocated the system of keeping record of all cases in obstetrics, attended by the physician, inasmuch as the testimony of a number of witnesses would tend much to clear away many existing difficulties. In the course of his report, the speaker cited many cases of professional interest which had come beneath the experience of himself, and other physicians with whom he had been associated. A delegate moved that the report be accepted, and referred to the publication committee.

The motion, after a few remarks by Dr. Corliss, of New York, narrating certain difficult obstetrical cases attended by him, was carried.

NOMINATING COMMITTEE.

The committee on nomination of officers was appointed, as follows:

Cumberland county, G. W. Albin; Adams county, A. Miles; Cook county, R. G. Bogue; McLean county, H. Noble; Will county, W. R. Knox; Fayette county, F. B. Haller; Champaign county, G. T. Penman; La Salle county, J. C. Corbus; Christian county, B. F. Barnes; Macoupin county, J. P. Mathews; McDonough county, G. H. Bane; De Kalb county, H. F. Page; Sangamon county, H. B. Buck; Macon county, I. N. Barns; Iroquois county, Elias Wanzer; Jersey county, J. Hamilton; Livingston county, P. Eppler.

RESIGNATION.

The resignation of Dr. N. S. Davis as permanent secretary of the society, after having held the position for 12 years, was tendered.

The resignation was, on motion, accepted, and a vote of thanks tendered to the gentleman for the able and faithful manner in which he has discharged the duties of his office.

APHASIA.

Dr. Hurd, of Galesburg, appointed, at the last meeting, a committee to report a paper on aphasia, not having completed the article, was requested to perfect it as soon as possible, and submit it to the publication committee.

CHOLERA INFANTUM.

Dr. N. Wright, of Chatham, and H. C. Barrell, of Springfield, were continued until next year as a committee on cholera infantum.

SURGICAL APPARATUS.

On motion of Dr. Davis, of Chicago, the order for the first hour of this morning's session, was determined to be the exhibition of surgical apparatus for treating fractures of the leg, femur, head of humerus, olecranon process, and lower jaw, by Dr. E. A. Clark, of St. Louis.

STAPHYLORAPHY.

Dr. Moses Gunn, of Chicago, the committee on staphyloraphy, then read a report upon the subject, premising his remarks by the regret that no extended information could be obtained upon the subject. It was first practiced, though unsuccessfully, by a German physician in 1817. Two years later, another European practitioner, though unaware of the previous operation in Germany, performed it successfully. A little later, the elder Warren of Boston, also ignorant of the above named efforts, was successful in the same operation. All these cases, however, simply involved the closure of the partial fissures in the palate, and it was not

until some years later, that Dr. J. Mason Warren, a son of the above named surgeon, planned a successful operation for the closure of a complete fissure in the arch. In continuing his report, the gentleman cited many cases reported to him by some of the leading surgeons of the country, and three that had come under his own experience; though in the latter, and in many of the former cases, no improvement to articulation was achieved.

Dr. Corliss, of New York state, cited the case of an operation performed by Dr. Buck, of New York, in which, after the operation, the patient was afforded the means of speech by an artificial palate made by a dentist. Dr. Buck, the speaker considered, was probably the most successful exponent of plastic surgery in the world.

Dr. N. S. Davis, of Chicago, did not consider that in this case the improvement to speech was due to the surgical operation of Dr. Buck, so much as to the artificial instrument supplied by the dentist.

The report of Dr. Gunn was then referred to the committee on publication.

REMOVAL OF CATARACT.

A volunteer report upon the methods of increasing success in the removal of cataracts from the eye was read by Dr. J. S. Hildreth, of Chicago, and referred to the committee on publication.

ADDITIONAL DELEGATES.

The following additional delegate to the convention were reported:

Drs. D. O Crist, of Bloomington; H. W. Boyd, of Chicago; M. O. Heydock, of Detroit Medical college; N. T. Quales, of Chicago: A. Grosbeck, of Chicago; H. P. Merriman, of Chicago; R. N. Isham, of Chicago; G. R. Russ, Cook County hospital; D. T. Nelson, of Chicago; J. V. Z. Blaney, of Chicago (permanent member); H. F. Page, of Sycamore; W. H. Byford, of Chicago; E. Holderness, of

Tonawanda; Thomas Bevan, of Chicago; S. J. Avery, of Chicago; E. O. F. Roler, of Chicago (permanent member); V. L. Hurlburt, of Chicago; J. Adams Allen, (permanent member.)

THE NEXT MEETING.

A communication was received from the Bloomington Medical society, offering accommodations for the next meeting of the society in that city.

The society then adjourned until 9 o'clock this morning.

SECOND DAY—MORNING SESSION.

The Illinois Medical society commenced the second day's session of its annual meeting, May 19th, at 8 o'clock, pursuant to adjournment, the president in the chair.

According to the resolution of the previous afternoon, the first hours of the session were devoted to the exhibition by Dr. Clarke, of St. Louis, of surgical apparatus of his own invention, for the treatment of simple and compound fractures of the leg.

The apparatus of Dr. Clarke was explained in detail, and appeared to give general satisfaction to all the gentlemen present.

In reply to the question from Dr. Corliss, of New York, Dr. Clarke said that he did not believe in the value of starch bandages in cases of compound fractures of the leg unless the fracture be oblique, and there is no shortening.

NEW MEMBERS.

Dr. J. Van Dyke, of Oswego, N. Y., was elected a member of the society by invitation, and the following gentlemen were also elected members of the association: Drs. W. C. Lyman, of Chicago; Samuel J. Jones, of Chicago; Nelson Lowrin, of Chicago; E. Marguerat, of Chicago; Charles Hunt, of Dixon, and J. R. Corbus, of Amboy,

ADDITIONAL DELEGATES.

The following additional delegates were announced as being present: Drs. C. W. Oleson, Bloomingdale; A. Ward, of Aurora; R. J. Patterson, of Batavia; D. S.

Jenks, of Plano; S. P. Bread, of Bureau, D. L. Ware, of Chicago.

NOMINATION OF OFFICERS.

The committee on nominations, through its chairman, Dr. H. Noble, reported the following ticket for election for the ensuing year,

President—Prof. J. V. Z. Blaney, of Chicago.

First Vice President—Dr. G. W. Albin, of Neoga.

Second Vice President—Dr. H. B. Buck, of Springfield.

Treasurer—Dr. J. H. Hollister, of Chicago.

Permanent Secretary—Dr. T. L. Fitch, of Chicago.

Assistant Secretary—Dr. Chas. Hunt, of Dixon.

Place of meeting next year—Bloomington, Ill.

COMMITTEES.

The following committees were also nominated:

Practice of Medicine—Dr. C. Goodbrake, of Clinton; Dr. J. S. Whitmire, of Metamora; Dr. Ira Barnes of Decatur.

Surgery—Dr. oses Gunn, of Chicago; Dr. G. R. Bibb, of Jacksonville: Dr. John B. Hamilton, of Jerseyville.

Obstetrics—Dr. Elias Wanzer, of Gillman; Dr. J. T. Penman, of Champaign; Dr. D. R. Breed, of Princeton.

Drugs and Medicines—Dr. Charles Hunt, of Dixon; Dr. C. R. Park, of Bloomington; Dr. T. G. Hickman, of Vandalia.

Necrology—Dr. J. H. Hollister, of Chicago; Dr. F. B. Haller, of Vandalia; Dr. J. O. Hamilton, of Jerseyville.

SPECIAL COMMITTEES.

The following special committies were also nominated:

Criminal Abortions—Dr. De Laskie Miller, of Chicago; Dr. W. H. Byford, of Chicago; Dr. H. Noble, of Bloomington.

Opthalmology—Drs. J. S. Hildreth, E. L. Holmes, and S. J. Jones, of Chicago.

Pulmonary Tuberculosis—Dr. J. R. Ross, of Chicago; J J. N. Viglas, of Peoria; T. D. Washburn, of Hillsboro.

Use of Plaster of Paris in Fractures—Dr. R. G. Bogue, of Chicago.

Otology—Drs. Samuel J. Jones, of Chicago; J. R. Corbus, of Amboy; and J. S. Hildreth, of Chicago.

Committee on Arrangements—Drs. Everett, Phillips, Hunt, J. C. Corbus, and E. P. Cook, of Dixon.

PLACE OF MEETING.

The report was so amended as to fix the place for the next annual meeting at Dixon, instead of Bloomington, and as so amended was unanimously adopted, and ordered published.

LITHOTOMY.

An able and valuable paper upon lithotomy was reported by Dr. E. Powell, of Chicago, and after some discussion upon points brought out by the reports, was accepted and referred to the committee on publication.

INVITATIONS.

Dr. S. J. Jones, of this city, extended an invitation to the society to visit his office, No. 22 Washington street, this evening, for the purpose of inspecting some surgical instruments which had been obtained by him from Europe.

The invitation of Dr. Davis for the delegates, with their ladies, to visit him at his residence, No. 797 Wabash avenue, in the evening, was again read for the benefit of those delegates who had arrived during the morning.

DRUGS AND MEDICINES.

Dr. N. S. Davis, of Chicago, chairman of the committee on drugs and medicines, read the report of that committee upon the subject. The report was of an able and explanatory character, embracing the improvements that had been effected during the year, in the introduction of new remedial agents, and also to notice the practice of the adulteration of drugs.

After a brief discussion regarding the relative merits of peroxide of hydrogen, mentioned in the report as a powerful agent in adding oxygen to the blood, and thereby

imparting vitality to the system; and the permanganate of potash, which has been used to produce the same effect, with marked success by several gentlemen present, the convention adjourned until afternoon.

IN THE AFTERNOON

the delegates visited the several hospitals and medical colleges in the city, and

IN THE EVENING

accepted the invitation of Dr. N. S. Davis, and visited him with their ladies, at his residence on Wabash avenue. Here a very pleasant time was spent and the party broke up at a reasonable hour, highly pleased with the hospitality of their entertainer.

LAST DAY'S SESSION THURSDAY, MAY 20, 1869.

The Illinois State Medical society re-assembled in the council chamber of the court house, Dr. S. F. Trowbridge, president of the society, in the chair.

REMEDIES.

Dr. D. Ingalls read a paper on "Remedies," which was principally a plea in favor of assisting rather than inducing nature to the work of restoration. In this connection he strongly denounced the exploded barbarities which obtained with old-time surgeons, and deprecated the use of sanguinary measures in the treatment of disease as unwarranted by the present condition of science. The prejudice cherished in almost every family, in favor of simple but strong cathartics, was also reproved. He preferred to aid the organs of the human system, in their efforts to repair the ravages of disease, rather than to ignore this subtle process, and to interfere violently with instruments or drugs. The address was very well received by the meeting, and was referred to the committee of publication.

NECROLOGY.

Dr. J. H. Hollister, of the committee on necrology, presented his mortuary report, from which it appeared that

only one of the members of the original society, organized nineteen years ago in Springfield, was alive. The doctor then paid brief tributes to the memories of several of the illustrious dead, commencing with the obituary of Prof. B. W. Herrick, first president of the society.

The report was referred to the committee on publication.

ANÆSTHETICS.

Dr. E. Andrews presented a report on the comparative merits of the various anæsthetics known to the professsion. He declared that nitrous oxide gas was the safest and pleasantest of all, but that its effects were too temporary to be useful in a protracted surgical operation.

An animated debate followed, in which Drs. Gunn, Fitch, Hildreth, Andrews, Ingalls and Hollister participated, each submitting cases which had come under his cognizance.

INSANITY.

Dr. R. J. Patterson, of Batavia, who had prepared a paper on the legal conditions of insanity, having left by an early train, his essay was read by the Secretary. It was a dissertation upon the legal points involved in every case of lunacy, and the state laws with reference to lunatic asylums. The paper was referred to the committee on publication.

A VOTE OF THANKS.

A vote of thanks was then tendered to the common council, the city physicians, and the officers of the society.

ADJOURNMENT.

The meeting then adjourned *sine die.*

Proceedings of the Chicago Medical Society.

FRIDAY EVENING, April 30th, 1869.

Regular weekly meeting of the society, President Bogne in the chair. Exhibition of pathological specimens being in order, Vice President Schmidt presented several pieces of comminuted bone, from the elbow-joint of a man. The

fracture involved the condyles of the humerus as also the head of the radius and olécranon of the ulna. Resection of the bones was accomplished with the chain saws, eighteen months since. The patient, a musician, has regained good use of his arm. The doctor thinks where the olecranon or other bony prominences are left in the wound, the cure is retarded.

Dr. Wanzer reported a case of fracture of the external condyle of the humerus, and a part of the shaft; that after removing the comminuted bones, the limb was dressed at right angles; that active inflammation supervened; that so great was the sensibility of the part and irritability of the patient, that passive motion was prevented without anæsthesia; that bony anchylosis was the result, but the patient has very good use of his arm.

Dr. Danforth asked if we ought not to expect from surgery better results than anchylosis in such cases.

Dr. Bogue thinks anæsthetics are indicated that with them occasional passive motion should be attempted, to prevent permanent anchylosis.

Dr. Loverin thinks the rectangular position correct; that where such extreme sensibility of the part exists, that passive motion need not be persisted in.

Dr. Wanzer reported a case of hydrocele involving the left half of the scrotum. The patient had been suffering five years until its size became inconvenient, and the traction upon the cord was very painful; a quart of liquid was evacuated with the canula, and a seton passed through the aperture and above. The parts have contracted to nearly their normal size, and we hope the cure is radical.

Dr. Toverein is in favor of iodine injected into the sac; has seen adhesive inflammation and contraction follow.

Dr. Bogue stated he had used the iodine with occasional benefit, but had found operation by incision always a radical cure. His method is to lay the sac freely open.

Dr. Wanzer reported a case of double hydrocele, which he had tapped several times, and was afterward cured radically by incision.

On motion, Society adjourned.

CHICAGO, May 7, 1869.

Regular weekly meeting of the society, President Bogue in the chair.

The discussion for the evening being in order—What is the pathology and best treatment for cystitis, both acute and chronic?

Dr. Quales stated that the causes most frequent were traumatic, viz.: by the maladroit use of instruments, blisters, hemorrhoids, and foreign bodies in the bladder, stricture urethra, or fistula in ano. It may be acute or chronic. The treatment in the acute form should be more local than general, viz.: warm baths, enemas, and the recumbent posture. In the chronic stage, bal. copaiba, the terebinthinates, and decoctions buchu. The diet should be light in the acute, but more supporting in the chronic variety.

Dr. Paoli stated that there were few practitioners of ten years' standing but had seen cystitis; that the causes of the acute form are often cold, with those who work in low, damp localities; the causes of the chronic were gravel, stricture urethra, and fistula; that the disease was often overlooked. The symptoms are tenacious mucus in the urine, painful micturition, pain over the pubis, and general debility. He recommends decoction uva ursi and injections of tepid water into the bladder.

Dr. Reid said his experience in the traumatic variety was limited, but has treated many cases of the chronic variety; reported a case in an old lady, who passed much tenacious mucus. There was frequent micturition, urine often bloody. She was much debilitated, but finally recovered; that she afterward relapsed in consequence of intemperance, and the doctor withdrew from the case. He treated her

first with bal. copaiba and black drop, and found benefit from decoction uva ursi. Where there were bloody discharges he used the terebinthinates, with tinct. opii; had resorted to ferruginous tonics, laxatives, anodynes, suppositories, injections of solution plumbi acetas into the bladder.

Dr. Danforth stated that, in the acute form, his treatment was both local and general. Locally, the hot bath, fomentations of hops and opium over the bowels; internally, linseed tea, the watery solution of opium and belladonna, with occasional saline purgatives. In the chronic form, had used ergot. Where the discharges were pus and mucus, used acid nitric, with opiates and vescical injections of argent. nitras, grs. 2 to 1 pint water. Had used tonics and stimulants, and had found the disease very obstinate.

Dr. Bogue stated he had found in acute cystites the hot hip bath beneficial; also washing out the bladder with tepid water, suppositories of morphia and belladona into the rectum, with fomentations over the bowels beneficial. The bowels should be kept soluble; in the chronic variety thinks the hypertrophy and inflammatory condition not always permanently relieved, and the disease is liable to return. He says the measures he adopts are injections in the bladder of weak solution argent. nitras, cupri sulphas or zinci. The causes of the disease are stone or other foreign bodies in the bladder; thinks radical cure may be accomplished by opening the bladder, allowing it to be at rest; says cystitis in old people is generally caused by enlarged prostate. In such cases the catheter is the remedy with injections of tepid water into the bladder. Where stricture-urethra is the cause to relieve the stricture.

Dr. Paoli stated that it was difficult to introduce the catheter in old people, where the disease had lasted many years in consequence of hemorrhage, and that the coats of the bladder had degenerated.

The Society then adjourned.

HIRAM WANZER, Sec'y.

EDITORIAL.

The publication of the CHICAGO MEDICAL JOURNAL having passed into the hands of the subscriber, all payments for subscription and accounts, either past or future, must be made to me, unless otherwise directed. Subscribers who have neglected to pay their subscriptions on volumes previous to the present year must remit at an early day or the publisher will be compelled to discontinue sending them the JOURNAL.

Our subscribers will please remember the JOURNAL is $4.00 per annum, if not paid before July 1st of each year, and act accordingly.

The editorial management will remain as heretofore, in the hands of Dr. J. Adams Allen, assisted by Dr. W. Hay, to whom communications in his department should be addressed.

J. WOLCOTT HOOKER,
Room 12, Union Building.

CHICAGO, May 1st.

In order to give place to the reports of the proceedings of the Medical Congress at New Orleans, and of the Illinois State Medical Society, which present much that would interest our readers, we have been compelled to omit our usual original matter. We found ourselves troubled with an *embarras des richesses.*

OBITUARY.

DIED—JEROME BUCKNER EGBERT, M. D., son of Captain Louis J. Egbert, in Henry, Marshall county, Ill., May 14, 1869, aged 27 years, 5 months, 1 day. Dr. Egbert studied two years with Dr. J. W. Gordon, of Georgetown, Ohio, during which time he attended one course of lectures in one of the Ohio schools of medicine, in Cincinnati. When the war broke out in 1861, he enlisted in company C, 59th Regiment Ohio Volunteer Infantry, and was immediately made Hospital Steward at Camp Dennison, at which place he took sick and was discharged. In 1862 he enlisted as Hospital Steward of the

79th Ohio Volunteer Infantry, and served during the war in that capacity, going from Nashville to the sea, and at the end of the war received an honorable discharge. His father, in the meantime, having moved to Metamora Woodford county, Ill., Dr. Jerome turned his face westward, and, during the year 1865, spent the last year of his studentage in the office of Drs. J. S. and Z. H. Whitmire, in Metamora, Ill. During the winter of 1865–66, he attended his last course of lectures in Rush Medical College, Chicago, Ill., where, in the spring of 1866, he received the degree of Doctor of Medicine. In the spring of the same year he settled in Henry, Marshall county, Ill., in company with Dr. Charles Baker, an eminent practitioner, where he has remained ever since till his death. Dr. Egbert, during the three years in Henry, made himself an enviable reputation as a surgeon and practitioner of medicine. He was esteemed by the profession as a rising man and "a bright, particular star" in the field of science.

By the wealthy, he was esteemed as an estimable citizen; by the poor, he was reckoned their reliance in times of need; and by the philanthropist, he was esteemed for his many virtues and good qualities of head and heart.

When the world lost him, it was like a planet that has flitted from its orbit and ceased to shine upon the earth.

He will be taken to Georgetown, Ohio, and laid by the side of his sainted mother.

Peace be to his ashes, and may his virtues and example never fade from the memory of those who knew him. JAMES S. WHITMIRE.

Metamora, Ill., May 16, 1869.

ORIGINAL COMMUNICATION.

LEAVENWORTH, April 10, 1869

DR. J. ADAMS ALLEN:

DEAR SIR:—A person, calling himself Dr. M. F. Turner, is traveling through Kansas with a letter, purporting to have been written by yourself, recommending him to the good offices of medical men.

The letter looks like a forgery to me, and I am certain that the person, though a cripple, is unworthy of the aid he is asking. If you will inform me, if the letter is not genuine, I will put the medical men of this State upon their guard against the man. Very truly yours,

C. A. LOGAN.

CAVE CANEM.

The Editor's reply to Dr. Logan's letter with regard to one M. F. Turner, a traveling mendicant, was unfortunately omitted in making up the forms of the last number. Briefly, there is no greater nuisances than letters from physicians to others of the craft, endorsing such claims for charity. We have been personally bled *ad deliquium animi* in this way, and will never be a party to such an imposition on others. It is perhaps unnecessary to say that the letter referred to by Dr. Logan is a sheer forgery.

But we confess to have a dim recollection of having been bitten by a scamp who is well described by our friend Logan, who had his pockets stuffed with letters to the present writer.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JUNE 15, 1869.—No. 12.

REPORTS OF MEDICAL SOCIETIES.

American Medical Association—Annual Session for 1869.

[Concluded from last Number.]

The Committee on Nominations—Dr. J. J. Woodward, U. S. N., President—reported the following names:

REPORT OF THE NOMINATING OCMMITTEE.

NEW ORLEANS, LA., May 6, 1869.

For President—Geo. Mendenhall, Ohio.

For Vice Presidents—Warren Stone, La.; Lewis A. Sayre, N. Y.; F. Gurney Smith, Penn.; John S. Moore, Mo. follows:

The Committee on Nominations unanimously report as follows:

For Assistant Secretary—Wm. Lee, D. C.

For Treasurer—Caspar Wister, Penn.

For Librarian—Robt. Reyburn, D. C.

Committee of Arrangements—Thomas Antisell, Chairman; Robert Reyburn, C. M. Ford, L. W. Ritchie, W. J. C. Duhamel, D. R. Hayner, C. F. Nally.

Committee of Publication—F. Gurney Smith, Pa., Chairman; W. B. Atkinson, Pa.; A. J. Semmes, Ga.; Robert Reyburn, D. C.; Caspar Wister, Pa.; H. F. Eskew, Del.; Wm. Maybury, Pa.

Committee on Medical Literature—J. J. Woodward, U. S. A., Chairman; W. H. Anderson, Ala.; Theophilus Parvin, Ind·; Hosmer A. Johnson, Ill.; C. W. Parsons, R. I.

Committee on Prize Essays—Grafton Tyler D. C., Chairman N. R. Lincoln, D. C.; N. R. Smith, Md.; G. W. Miltenberger, Md.; W. R Dunbar, Md.

Committee on Epidemics—Add the following to fill vacancies: J. K. Bartlett, Wis.; J. B. Jackson, Ky.

Committee on Education— T. G. Richardson, La., Chairman; E. W. Jenks, Mich.; E. S. Gaillard, Ky.; W. M. McPheeters, Mo.

Time for meeting, in Washington, first Tuesday in May 1870.

J. J. WOODWARD, U. S. A., *Chairman.*

The report was unanimously adopted.

Dr. Davis offered the following:

Resolved, That a special committee of three be appointed by the President to present copies of the resolutions adopted before the several State medical societies at as early a period as possible. Adopted.

Dr. Chaille, of Louisiana, chairman of the committee presented a report on medical nomenclature, which was received and adopted, and referred to the Committee on Publication.

The Committee on Nomenclature of Diseases have the honor to report that it has examined the "Provisional Nomenclature of the Royal College of Physicians" of London, and is of the opinion that it is desirable for this association to recommend and adopt the same for general use for this country, with such modifications as, on deliberate consideration, may appear to be necessary. The following resolutions are therefore submitted.

1. *Resolved*, That a special committee of fifteen be appointed by the President to take this subject into deliberate consideration, and to report at the next annual session what alterations, if any, are necessary to adapt the proposed nomenclature to general use in the United States.

2. That this committee be authorized to fill up any vacancies which may occur upon it.

3. That The Committee on Publication be authorized to publish for general distribution one thousand copies of the English and Latin portions of this nomenclature, under the designation of the Proposed Nomenclature, prefacing the same with such remarks as may be deemed necessary to secure the criticism and co-operation of as large a number of American medical men as practicable.

4. That the committee hereby appointed be directed to draw the attention of the Surgeon General of the Army, of the Chief of the Bureau of Medicine and Surgery of the Navy, and of the Superintendent of the Census, to the question of their official adoption of the proposed Nomenclature; to invite them to appoint whom they see fit to represent them on this committee; and to solicit such co-operation as may be necessary to accomplish the purpose desired viz., the final adoption of nomenclatureand classification as will receive the conjoint approval of the official medical bureaus of the Government and or the general profession.

STANFORD E. CHAILLE, M. D., *Chairman.*

COMMITTEE.

S. E. Chaille, Louisiana;
J. J. Woodward. United States Army:
A. B. Palmer, Michigan;
F. F. Smith, Pennsylvania;
J. F. Heustis, Alabama;

The following committee of fifteen was appointed:

Francis G. Smith, Chairman; J. J. Woodward, U. S. A.; R. F. Michel, Alabama; A. B. Palmer, Michigan; S. E. Chaille, Louisiana; L. P. Yandell, Jr., Kentucky; Austin Flint, New York; Alonzo Clark, New York; George B. Wood, Pennsylvania; S. H. Dickson, Pennsylvania; E. Jarvis, Massachusetts; Theo. Parvin, Indiana; W. M. Mc-

Pheeters, Missouri; E. M. Snow, Rhode Island; N. PinckneyU. S. N.

The Committee on Medical Education having referred matters at issue to State Medical societies, Dr. E. S. Gaillard of Louisville, offered the following motion:

Moved, That the adoption of a uniform rate of collegiate's fees $120, being the MINIMUM, be accepted as the sentiment and desire of this association.

Dr. Gaillard stated that he would not trespass upon the time of the association in speaking upon this motion; that all of the members present were fully informed upon this subject. He said the profession desired to learn the wish and decision of the association upon this all important question, and he asked a full expression of opinion and a full vote in regard to it.

Dr. Sayre, of New York, opposed the resolution, but, on understanding that it did not prohibit an increase of fees, withdrew his objections. He spoke against cheap medical colleges, which allured young men to an imperfect medical education, who were afterward turned back to the plow.

An amendment was proposed by Dr. Logan, of Louisiana, to make the minimum $140 instead of $120.

Dr. Mussey, of Ohio, opposed the amendment, and stated that the fees of Ohio had to be kept down, to accord with the fees of Michigan colleges. The location of the college and the cost of living made the difference. A hundred and forty dollar college is considered good, simply because a hundred and forty dollars is the fee, while other colleges were equally as good where the fees were only eighty dollars. It is impracticable to accomplish this change at once. A new college starts and comes up to the full standard of the old college in the vicinity, and the latter comes down with its fees. The new college must come down also, in order to maintain itself.

Dr. McPheeters, of Missouri, did not agree with Dr. Mussey that it was impracticable to fix the collegiate fees at

a minimum of one hundred and twenty dollars. He favored the original resolution, without amendment.

Dr. Palmer, of Michigan, alluded to the remarks of Dr. Sayre, of New York, disparaging one-horse and cheap colleges. The University of Michigan was established and allowed a donatian from the General Government of two townships of land, and it has husbanded its resources, and can maintain itself with moderate fees. Under the organic law of the State, citizens of Michigan were entitled to the benefits of the university free of charge, and, as a liberal donation had been made by the General Government, students had been admitted from other States on the same terms. Lately, however, a small fee had been charged for students from other States who received the benefits of the lectures. We come up in fees just as far as we think is for the advantage of the institution, and we do not go beyond that point, because it will diminish the numbers. We are willing to put up the fees for students from other States to one hundred and forty dollars, if neighboring States will make the same requirements as we do.

Dr. Palmer then commenced describing the *great advantages of this school*, when Dr. Gaillard called him to order, stating that we were present to discuss principles involved, and not to listen to eulogies upon special schools.

Dr. Davis, of Illinois—I do not object to discuss the fees, but I do claim that it is out of place to advertise the superior claims of State colleges here. We have had no more illiterate students in our Illinois college than have come to us after one course in the University of Michigan.

Dr. Parvin, of Indiana—I move to amend by striking out $140 and inserting $100. If we make the fees of colleges uniform, the next step will be to make the fees of practitioners uniform—the same in villages of the West as in the city of New York—and that is not equitable or practicable.

Dr. Logan, of Louisiana, advocated the sum of $140 as the minimum of college fees, and advocated the adoption of his amendment. Lost.

The amendment of Dr. Parvin, to fix the minimum at $100, was also lost.

The resolution was then, as originally presented, unanimously adopted.

Special committee on the relative advantages of Syme's and Pirogoff's mode of amputating at the ankle—Dr. G. A. Otis, U. S. A., chairman; Dr. J. M. Holloway, of Louisville, Ky.

Proposed by J. J. Woodward. Approved.

Dr. Bemiss presented from Dr. John Waters, of St. Louis, Mo., a paper on the Doctrines of Force—Physical and Vital.

Dr. Toner, D. C., moved that a Committee on Variola be appointed—Dr. J. Jones, chairman. Adopted.

Dr. Pinckney, U. S. N., made statements concerning relative grades of rank. The paper was ordered to be spread upon the minutes.

Association adjourned to meet at 9 o'clock A. M., Friday, May 7th.

FOURTH DAY, FRIDAY, MAY 7, 1869.

The association met at 9 o'clock, Dr. Baldwin in the chair.

Reading of the minutes omitted.

Dr. Joseph Jones, Louisiana, presented a number of specimens of pathology, anatomy, and natural history. The illustrations were very interesting, and received with applause.

On motion of Dr. Garrish, Kentucky, the thanks of the association were tendered to Dr. Jones.

On motion of Dr. F. G. Smith, of Pennsylvania, the following resolution was unanimously adopted by a vote of the members present, standing as a mark of respect:

Resolved, That the thanks of this association are justly due and are hereby tendered to the President, for the uniform kindness and courtesy with which he has presided

over its deliberations, and to the Committee of Arrangements, the physicians, and the citizens of New Orleans, for the generous hospitality and fraternal kindness with which we have been received and treated during our sojourn in their city, with the assurance that the memories of this visit will always be among the brightest and most enduring of our lives.

Resolved, That we also present our thanks to the various railroad and steamboat companies who have so liberally extended to us facilities of transportation, and to the daily press for their efficient aid in reporting the proceedings of this meeting.

On motion of J. P. Moore, of Mississippi, the following preamble and resolution were adopted:

WHEREAS the contract system is contrary to medical ethics.

Resolved, That all contract physicians, as well as those guilty of bidding for practice at less rates than those established by a majority of regular graduates of the same locality, be classed as irregular practitioners.

The following reports of the sections followed.

Sections on Meteorology, Medical Topography and Epidemics reported. Paper accepted and referred to the Committee on Publications.

Section on Practical Medicine and Obstetrics reported and were accepted, and referred to Committee on Publication.

And the report on Training of Nurses was accepted and the resolutions adopted.

Section on Medical Jurisprudence, Hygiene, and Physiology reported. Committee continued for next year. Report accepted and referred to Committee on Publication.

Section on Surgery proposed that their report be received without formality and be referred to the Committee on Publication. Adopted.

After being read, the report was accepted and ordered to be published.

Section on Psychology, the same disposition.

The President appointed Dr. J. M. Toner a committee of one, at Washington, D. C., to assist the Librarian of Congress to keep the books of the Association.

On motion for adjournment, the President delivered this address, which was unanimously accepted and ordered to be published in the transactions of the Association.

GENTLEMEN—Before I submit the motion just made, and which, when adopted, will practically close my official relations to this body, allow me to return you my most cordial and grateful thanks for the universal kindness which I have received at your hands. Whatever my future lot in life may be, the world holds no honors which to me can equal those conferred by you. The fraternal good-will which has so conspicuously marked your deliberations has been to me a matter of infinite satisfaction and pride, and will not be the least among the grateful memories which will gladden my heart as I may hereafter review the incidents of my official connection with you.

To win your judgment and approval, to hold up the dignity of fellowship, the usefulness of association and the interest and prosperity of the profession at large have certainly occupied my most anxious thoughts since my elevation to this position; yet to cherish and promote the intimate and cordial relations of friendship between the individual members of this Association against all sectional distinctions or geographical lines, has also been among the chief objects of my ambition and the earnest desires of my heart. Could I now believe that my efforts have contributed in the slightest degree to enlarging that harmony of sentiment and fraternal feeling which has been so apparent throughout this meeting, I should feel that I had commenced at least to make some return for the great honor and kindness received at your hands.

It now only remains for me, gentlemen, to again express to you my thanks, to wish you a safe return to your homes

and labors, a happy reunion with your friends and families, and to pronounce that sad word, over which the heart of friendship would fain linger, as I bid you an affectionate farwell. W. O. Baldwin, *Pres't A. M. A.*

The Convention adjourned to meet in Washington, D. C., the second Tuesday in May, 1870.

ORIGINAL COMMUNICATION.

Philadelphia, *May* 27, 1869.

Editor Chicago Medical Journal:

Necessary absence, producing an unusual amount of work, forbade my writing you before. Material was ample, but opportunity *rare*. You know doctors, especially, are very apt to jump on a hobby and *ride* it too, sometimes, unfortunately, to death. My hobby was chosen sometime ago, and though I have at times ridden hard, and not unfrequently pranced my steed before your readers, still I am glad to say it is renewing strength daily. Mine is a speculum. With it how much good has been accomplished for suffering womankind. In this letter I have to relate three cases of procidentia and prolapse of the uterus, all of which were completely cured by the operation, *known* (only in books) under the term *episoraphia*. This operation for the permanent relief of patients affected as before-mentioned, was first proposed by M. Girardin, and resembles very closely Dupuyrens or Hey's operation for prolapsus ani. It has been performed now by very many in our own country, as well those abroad. The operation consists in removing a portion of the vaginal mucous membrane with scissors or bistoury, and then bringing the edges together with the quilled suture, thus making the extent of vaginal openiug as much

less as the amount removed. A prolapsed uterus by no means is dependent on the laxity and elongation of the ligaments. While these ligaments *aid* in maintaining the uterus in proper position, the *walls of the vagina* perform this function especially.

Prolapse, either in greater or less degree, *must* result from an uterus largely hypertrophied, and of course increased in weight as well as in size. And in very many cases, as soon as the inflammation and hypertrophy are cured, the prolapse also is cured. But if this does *not* remedy the evil, we must have recourse to this operation. Within the past few months three cases have come under my observation and treatment. The first is that of Mrs. B., age 37, mother of three children. Has been a resident of St. Louis. When first called to her I found two-thirds of the womb outside of the os externum vaginæ. Thus she had been since the birth of her last child, three years ago. The bowels were costive constantly, and the irritation of the bladder was almost unbearable.

The second case is that of Mrs. G., age 31, mother of five children. Has led a life of care and trouble, compelled by poverty to labor constantly. On examination I found *more* than two-thirds of the uterus to be external to the mouth of the vagina, and the former mucous membrane covering the uterus and vagina changed to true skin. Bowels costive, and constant dribbling of urine. She had suffered in this way for nearly five years.

The last case is that of Mrs. L., age 43, a woman of rather easy virtue, to say the least. Ceased menstruating two years ago. *Has had three abortions produced on her.* On examination of this case I found the uterus just down to the opening of the vagina, while both the anterior and posterior walls of the former protruded about two inches, causing much soreness and frequent desire to urinate.

In all of these cases, as the only means of sure relief, the

operation of sewing up the perineum was performed. In every case the success was perfect. In the first one, that of Mrs. B., I had some difficulty in my *after treatment* occasioned by the infiltration of urine which occurred. This was obviated, and I am pleased to report the *entire success* of these three cases, affording an example of the perfect cure of one of the most troublesome affections to which women are subject. Yours, truly,

E. R. Hutchins, M.D.

Lacerated and Contused Wound—Treatment of.

BY C. F. HART, M.D., CHICAGO.

Was called Saturday, about half-past four o'clock, P. M., of March 27th, to 99 W. Polk street, to see Mr. L.'s son, age between 12 and 13 years, who had been caught in the machinery of one of the planing mills near by.

I found him suffering from a wound in the thighs and nates, extending as high as the lumbar region, the right leg posteriorly, and inwards, to the inner edge (if I may so express myself), outward, forward and inward, to the sartorius muscle, where the femoral artery passes under it, downwards as much as two-thirds the length of the thigh. The right hand was also caught, taking off a part of the adductor muscle of the thumb, and extending up the wrist, about one and a half inches, and the same in width, exposing the tendons, but not injuring them.

Dr. Wanzer was called and reached there before any thing was done more than ordering the dressing. We both thought it rather a hopeless case, and the probabilities were that he would not recover from the shock. Chloroform was administered, and we made a more thorough examination, and found the following parts destroyed, or partially

so. The muscles were the gluteus maximus, both sides, that of the right side from near its middle to its insertion, gluteus medius, internal and external sphincters, all gone, with surrounding adipose tissue, biceps, tensor vaginis femoris, rectus, and touching the sartorius. The arteries were superficial branches of the gluteus, external hemorrhoidal, and external circumplex. The fascia on the anterier of the thigh was not divided but badly contused, and torn loose, so that you could pass your hand under nearly to the ilium, with the muscles torn apart from below the trochanter, making a hole three or four inches in length. The nerves were all the superficial of those parts, viz.: branches of the great and small sciatic, the gluteal and hemorrhoidal, the latter being a branch of the pudic. The great sciatic was exposed from one to one and a half inches above where it passes under the biceps, but not injured.

What was to be done? Amputation was not only impracticable, but impossible. We decided to try to save both life and limb. After removing the clothes and chips, the parts were well cleansed with tepid aqua, then washed with a solution of carbolic acid, composed of one part acid, thirty parts aqua, then anointed with carbolic oil-acid—Carbol. ℥i, Ole. Lini. ℥vi. Carbolic paste was then applied over the entire wound, from one-eighth to one-fourth of an inch thick. Calcis Carbonas, Ole. Acid Carbol., q. s. Make in soft paste. He rallied well from the chloroform, pulse about fifty, and compressed. Stimulants were administered, and directed to be continued every twenty or thirty minutes until my return.

9 o'clock P. M. Had slept nearly a half hour. Pulse about 60. Gave him Tinct. Opii, Camph., gtt. xx.

Sunday, half-past six A. M. Had vomited twice during the night, and slept very little, suffering a good deal of pain. Pulse 80. Morphia Sulph. gr. ⅛, and repeat every two hours.

10 A. M.—Morphia vomited him every time he took it. Stomach very irritable. Discontinued Morph., and gave Tinc. Aconite Rad. gtt. ij, aqua ℥viij. Dose ℥ij. every half hour.

2½ P. M.—Still vomiting. Pulse 90, quick and small. Gave Calcis aqua ℥ij., milk, fresh, ℥ij., and continue every hour if necessary.

6 P. M.—Vomiting ceased after one dose Calcis aqua. Pulse 104, soft. Had slept some. Continue Aconite every two hours.

Monday, 8½ A. M.—Slept a little during the night, but not refreshed from it. Has a weak, debilitated appearance. Free of pain; pulse 140, small and quick. Continue Aconite every hour. Tinc. Ferri Mur. gtt. x every three hours.

12 M.—Still easy. Has had short naps, but does not seem rested from them. Pulse 124, soft. Continue Aconite and Ferri, as before. Opii Pulvis grs. x. M. et Div. in pill xx., one every four hours.

4. P. M.—Has had one hour's sleep; resting easy; pulse 124, soft.

7 P. M.—No change.

Tuesday, 8 ½ A. M.—Had a good night's sleep. Seems much refreshed and strengthened from it. Dressed wounds; hand and wrist doing well; thigh and nates sloughing, with appearance of gangrene. Syringed the parts with aqua tepid. Applied Ole. Carbol. freely, and covered well with Carbolic paste. Pulse small and quick, 140. Directed stimulants freely and heat to the feet.

12 M.—Pulse 150, quick and small; eyes glassy; respiration hurried; great restlessness, with shooting pains through the wounds. Continue stimulants, Ferri and Aconite as before.

3 P. M.—Not much change. Seems to rest easy for a few minutes after each dose of the aconite. Continue it every half-hour, as in the commencement.

6 P. M.—Pulse full and soft, 140, still the shooting pains through the wounds. Continue aconite every hour.

9 P. M.—Has rested tolerably well since last visit. Pulse about the same.

Wednesday, 9 A. M.—Has had a good night's sleep, and is much refreshed. Ate seven or eight oysters, and relished them. Wounds again dressed. Granulations sat up under the gangrenous parts; not much fatigued from the dressing. (Anæsthetics not used in dressing.) Changed him from a feather to a straw bed.

2 P. M.—Resting comfortably; slight pains in the wounds, with some trouble about micturating, as if there were stricture. Has to strain some time before the water starts. Pulse about the same.

4 P. M.—Was sent for. Is suffering great pain through the bowels, especially the hypogastric region. Great restlessness, with half-sighing and moaning. Pulse 120, small. Directed half-grain Opii and hot humulus fermentations to the bowels.

6½ P. M.—Still suffering severely from the bowels. Pulse the same. Passed some urine, thick; turbid, and small quantity, causing great pain and straining. Directed Spts. Nitri Dulc. ℥ss., Potass, Nitras, Sol. Sat. ℥i every hour and repeat Opii every two hours.

11½ P. M.—Has passed his urine once since last visit, with some pain and straining. Still restless; great tenderness over the hypogastric and umbilical regions. Changed Opii to Morphia grs. ⅛ every two hours, or until he gets easy.

Thursday, 9 A. M.—Rested tolerably well during the latter part of the night. Passed his water three times since last visit, without pain and clear. Took some oyster soup about 4 o'clock A. M., after it some Vini Gallici. At 6 A. M. ate a plate full of porridge, and called for more. Pains subsiding. Very much prostrated from the night's suffering. Pulse 106, soft. On examining the wounds we found the

granulations in the arm in a very languid condition, and gangrene had extended on the front part of the thigh to near the ilium and scrotum, and we were fearful it had reached the bowels. There was no tympanitis present, but the parts were exceedingly tender to the touch. He was too much exhausted to dress his wound, so we directed Vini Gallici, ad libitum, Morphia Sulph. grs. $\frac{1}{6}$ every two hours.

12 M.—Still very weak, and if any change, for the worse.

$2\frac{1}{2}$ P. M.—Still sinking. Pulse about 125 or 130. Respiration more hurried.

$6\frac{1}{2}$ P. M.—Gradually failing.

$11\frac{1}{2}$ P. M.—Still sinking. Pulse 130, weak and fluttering. Respiration more hurried. Voice rapidly failing. Can speak only in a whisper. Tongue and lips dry. Has suffered very little pain since morning. Has had two or three short naps. I should have stated before that during the afternoon and evening of yesterday the patient became anxious to have the family physician called. From some cause he had taken a dislike to myself and Dr. Wanzer, and I urged the family to send for him. His presence would quiet him more than an anodyne from us, and this morning Dr. Wanzer requested to be released from the consultations, and did withdraw.

Friday, $8\frac{1}{2}$ A. M.—From about 1 to 6 A. M. has rested well and slept soundly. Pulse 120, soft, with considerable volume. Gangrene checked; the line of demarkation clearly set up. Dressed wound. Find the entire surface covered with granulations (being absent at this dressing, the treatment was changed); dressed with fresh lard.

12 M.—Has rested well since morning Slight pains in the wound; nothing unusual. Pulse 106, full and soft.

3 P. M.—Pulse the same, and resting well. Continue stimulants, etc., with occasionally the morphia.

$6\frac{1}{4}$ P. M.—Resting easy; pulse 104, soft.

$10\frac{1}{2}$ P. M.—About the same.

Saturday, 8½ A. M.—Has had another tolerably good night's rest, though suffering, this morning, a good deal from his wounds, which were redressed. The gangrenous parts, most of them, are detached, or nearly so, a great deal of which was now removed. Fine, healthy pus, with granulations under the parts, but presenting a languid appearance. Dressed this morning with Unguent Basil, one part, fresh lard about four parts. Not approving of the treatment my connection with the case here ceased, though I consider the boy out of danger.

April 5, 1869.

Super Oxygenation, A Reply to Criticism and Strictures.

BY S. S. WALLIHAN, M. D., CHICAGO.

Since several of your patrons have brought my previous paper on Super-oxygenation, into a somewhat questionable notoriety by a pointed denial and insinuation of intentional unfairness, in one instance, and by what might be termed a specie of *reductio ad absurdum*, in another, it seems incumbent on me to briefly set things to rights.

Your correspondent at Zanesville Ohio,—Dr. McElroy, in his attempt to analyze the results of the use of artificial oxygen and other oxygenizing agents, in accordance with his somewhat peculiar and not any too clearly stated theory of vital dynamics and the invariable unity of origin of all pathological conditions, applies the usually received and constantly repeated opinions concerning the therapeutic nature of these agents. Virtually admitting that he has had not the slightest experience with any form of artificial oxygen, he nevertheless reaches the conclusion that all its therapeutic effects may be arrived at through the time-honored means of the bromides, the ferrides and the quiniades. He makes the fatal but very common, and therefore probable

excusable, mistake of assuming that a little more oxygen is nothing more nor less than a little more fresh air; and that it may be obtained just as effectually by a sojourn at the sea-shore, out-door labor, etc. My position, and that of every one who has fully investigated the therapeutic nature of oxygen and its gaseous compounds, is, that its *physiological* relations are definite and limited, while its nature and potency as a *remedial* or *therapeutic* agent are as yet very little known, entirely unlimited and as different from the former as though it were in reality another element. Throwing aside previous convictions,—the result of stereotyped chemical assumptions,—if Dr. McElroy will administer to a properly selected subject, even a few pints a day of artificial oxygen, duly diluted and modified,—which trifling quantity could be easily secured in its ordinary condition, from the atmosphere, by simply taking a few extra inspirations,—he will very readily convince himself that oxygen in one form is quite different from the same element in a slightly different form. Chemistry is full of even more striking anomalies of this very kind. Consider the innumerable compouuds of the three commonest elements, carbon, oxygen and hydrogén. The ultimate chemical composition of the most deadly vegetable poisons and of some of the blandest forms of food is almost identical. The contents of the rag pickers' basket, and the tempting sweets in the confectioner's window are chemically the same. But will we attempt to philosophize our digestive organs into an indiscriminate and indifferent use of sugar and cotton batting?

Dr. McElroy also assumes that all my patients,—at least all those reported as essentially benefited by a course of super-oxygenation,—belonged to "the better classes," and were suffering from lack of wholesome exercise,—in short were *lazy*. This assumption was as far from the facts in the case as the former one respecting the therapeutic na-

ture of oxygen &c. In at least four of the six cases given, the patients were of the medium class and if anything, *over-active* in their habits. The excessive and constant over-work of one in particular retarded his treatment materially. Plenty of fresh air and the sea-side are most excellent as hygienic, and in a degree, therapeutic considerations; but the limitless air of heaven and all the sea-shores from Greenland to the *Terra del Fuego* have failed to remove positive morbid conditions and change abnormal vital processes, as has been and can be accomplished by the agents in question, when properly exhibited. What physician would advise his patient to go to Newport or Long Branch, for relief from pronounced *uremia?* Or who would recommend a few forced sniffs of common air per day for *diabetes.*

Admitting all that your correspondent claimed in his lame analysis, how many chronic invalids in the ordinary practice of any physician can heed his advice to take to sawbuck and sea-side.!

On the whole, I cannot resist the conclusion that Dr. McElroy labored to no purpose, since in his concluding paragraphs, he admits that the treatment is an excellent substitute for impossible sea-shores and disagreeable, if not equally impossible, physical exercise, and by his virtual acknowledgment of its efficiency, thoroughly scientific nature, and its absolute necessity in the present state of society, he neutralizes all that he had previously said, and writes himself an ass, for having sai d anything.

In the Journal, for 15th May, I note Dr. Ziegler's exceptions to my reference to his labors in connection with nitrous oxide, etc. He broadly accuses me of misrepresentation and wilful injustice, since he concludes that all I know of the nature and value of protoxide of nitrogen, I derived from his publications.

I will only say that when the former article was written, I had never seen a copy of his work on the nitrous oxide,

nor of any one of the papers mentioned in it as having been previously published in the various medical journals. Nearly a year ago I made diligent inquiry for his work but could not find a copy in this city—was informed that it was out of print; and not until to-day (June 1st), have I been fortunate enough to secure a copy. I have just finished a careful perusal of it, and am frank to confess that I entirely misapprehended the character and results of his researches. What I had seen of his writings, before I wrote the article in question, was simply a few extracts quoted by Barker and others, who were treating of nitrous oxide as an anæsthetic.

The misrepresentation was, therefore, entirely unconscious and unintentional on my part. It is with pleasure that I make this professional amend. I find in his work much that is interesting and instructive, and am especially pleased to learn that some one before me has asserted the office of oxygenating agents, in connection with processes of vital reparation and supply. Nearly all physiologists are ready to admit that oxygen in any form may be made an eliminator, depurent, disintegrent, resolvent, sorbefacient, etc.; very few yet believe that it may be made a *materia alimentaria* as well as a *materia medica*, and, therefore, a direct invigorator of the whole vital organism. While very few question its power as a stimulant, still fewer have learned, that in this respect, it is wholly unlike all other stimulants, in that it is not followed by corresponding depression.

I trust Dr. Ziegler will see fit to supply the profession, ere long, with a new edition of his very interesting and important work.

EDITOR CHICAGO MEDICAL JOURNAL:

The following account of a case of aconite poisoning may not be uninteresting to your readers. The patient was a young man—twenty years old—had pneumonia. I was called to see him in great haste at 6:30 a. m., April 10th, and found that his attendants, contrary to directions, had given him medicine every (2) hours of the night, so that he got about eight drops of the tincture of aconite root each dose! Found him vomiting terribly at intervals of four or five minutes. Pulse fifty-six—was 114 the night previous; pupil dilated and jagged; surface cold; extremities nearly insensible; calling for something to stop his vomiting.

The nausea and vomiting came on suddenly; felt comfortable till it began; I gave him a hypodermic injection on the forearm of atropiæ sulph, gr. 1-40; and spirits frum., and aq. amm. internally. He vomited up a little greenish viscid fluid once, after administering the above. In ten minutes after the injection his vomiting and nausea all ceased; in twenty minutes more his pulse came up to 100, and in half an hour subsequently he was sleeping quietly, and continued sleeping for two hours. No further effects followed, except sore abdominal muscles. After giving the injection, and while I was preparing the whisky and amm. he said he felt the influence of the former and that it was quieting his stomach.

If I have another case of aconite poisoning I shall use atropia.

Respectfully yours, etc.,

J. H. ETHERIDGE, Evanston, Ill.

May 14th, 1869.

EDITORIAL.

Publication of the Journal.

The recent change in publishers of the JOURNAL, has been necessitated by the removal of the previous publisher from the city. It is practically impossible for the Editors, in the midst of their professional duties, to assume the business management, personally, and find any time to devote to the proper development of the scientific character of this now time-honored organ and exponent of the profession. Under the energetic and experienced control of our new publisher, the JOURNAL has already received a support which will

speedily enable us to add largely to its interest and value. Without expressly designating improvements contemplated we promise, in the remaining portion of the year, to furnish our readers a variety and amount of professional reading of the highest character, hitherto unequalled in the history of our magazine.

Since the inauguration of our semi-monthly series the Senior Editor has sustained the largely increased expenditure at great personal pecuniary sacrifice. He has been, and is, the sole proprietor. There remain upon the books thousands of dollars of unpaid subscriptions. Half of what is due would repay him for his advances, and relieve from an incubus which those who know him personally are aware is borne with a patience the farthest possible removed from Job's. We know, now, what makes Bro. Bowling of the Nashville *Journal* one of the most genial and delightful of our contemporaries. Out of the fullness of a joyous heart he exclaims, in a recent number, "This *Journal* owes no man a cent, and no man owes it a cent!" If we did not know Dr. Bowling to be a professional Chevalier Bayard, *sans peur et sans reproche*, we wouldn't believe a word of it.

But this is enough of a highly suggestive topic. In passing we only say: Pay what *thou* owest, so shalt thou rejoice the hearts of editors, publishers and readers, and on January next we shall hope to begin the issue of the JOURNAL once in every seven days, bringing the waters of medical wisdom fresh and sparkling from their original fountains.

Microscopy.

The State Microscopical Society of Illinois is now well established. Its membership numbers many of the most prominent and respected Illinoisans, with a sprinkling of honorary, corresponding and auxiliary associates. The following are its officers:

President—Dr. W. W. Allport.

Vice Presidents—Hosmer A. Johnson, M.D., George F. Rumsey, James V. Z. Blaney, M.D., J. F. Beaty.

Treasurer—George M. Higginson.

Secretary—J. Hankey.

Secretary, Foreign Correspondence—Samuel A. Briggs.

Council—S. A. Briggs, Joseph T. Ryerson, N. S. Davis, M.D., J. Hankey, W. C. Hunt, M.D., W. E. Dogget, J. H. Hollister, M .D., J. F. Beaty, Walter Hay, M.D., R. Ludlam, M.D., Samuel J. Jones, M. D., George M. Higginson.

Curator—H. F. Monroe.

Librarian—John Robson.

Photomicrographer to the Society—John Carbut.

The Society now numbers fifty-six resident members, one associate member, and as

Corresponding Members—Lieut. Col. J. J. Woodward, war department, Washington; Christopher Johnson, M.D., Professor of Principles and Practice of Surgery, University of Maryland, Baltimore; Prof. H. L. Smith, Hobart College, Geneva, N. Y.; J. B. McQuillen, M.D., Philadelphia.

Honorary Members—W. S. Sullivant, Columbus, Ohio; W. H. Wamsley, Philadelphia, Pa.; Rev. R. H. Walker, late of Wadham College, Oxford, Enhland.

The objects of the Society are the promotion and extension of microscopical knowledge in the West, and more particularly in our own State, by associating those together engaged in such pursuits, whether for purely scientific purposes or for recreative or educational purposes.

The Society extends the right hand of fellowship to the geologist, the chemist, the mineralogist. the anatomist, and the botanist—all of whom find the microscope a useful companion and an indispensable aid in their interesting researches.

New Journal.

We note, with pleasure, the announcement of *The Journal of the Gynæcological Society of Boston*, under the management of its officers, Drs. Winslow Lewis, H. R. Storer and George H. Bixby. The first number will be issued July 1st, and be continued monthly. $3.00 *per annum* or 35 cts. per number. JAMES CAMPBELL, 18 Tremont Street Boston, Publisher.

Medical Journalists.

NEW ORLEANS, *May* 12, 1869.

EDITOR CHICAGO MEDICAL JOURNAL:

Your attention is particularly called to the enclosed copy of Proceedings of the Convention of Medical Journalists. Soliciting your co-operation, I am, with respect, Your obedient servant,

W. S. MITCHELL, M.D.,
Permanent Sec'y.

MEETING AND ORGANIZATION.

On Wednesday evening, May 5th, a meeting of the Medical Society of Medical Journalists was held in the office, No. 1 Carondelet Street, New Orleans. The result of the assembly of prominent physicians was the formation of a permanent society; the election of N. S. Davis, M.D., President, and W. S. Mitchell, M. D., Permanent Secretary. The address of the Secretary is Lock Box 890, New Orleans. We append a report of the proceedings:

Pursuant to adjournment from the preliminary meeting on Tuesday, the meeting of Medical Journalists was called to order at 8 o'clock P. M., by Dr. N. S. Davis, of the Chicago *Medical Examiner*.

The Committee on Organization, through their chairman, Dr. Theophilus Parvin, of the *Western Journal of Medicine*, then presented the following preamble and plan of organization, which was unanimously adopted:

The Editors of Medical Journals in the United States, desiring to cultivate professional courtesies, to facilitate the conduct and general management of our journals, to promote their interests, their usefulness, and make

them a still greater power for professional and popular good, and especially to advance the interests of medicine, hereby unite together under the following

ARTICLES OF ASSOCIATION.

Name. — The Association of American Editors.

Purposes. — The cultivation of friendly relations, mutual assistance, community of effort and means, where practicable, in a system of receiving foreign exchanges, and of sending our own journals abroad; in urging, with hearty concert, improvements in the present system of medical education, and a higher standard of preliminary eduction of those who desire to enter upon the study of medicine; the collection of vital statistics; the collecting of the names of all the regular physicians in the United States, age, place, and date of graduation, if a graduate; also, the same in reference to graduation at literary institutions, if such graduation has taken place.

Meetings. — These shall be held, commencing at 10 A. M., on the day preceding, and at the place of the annual meeting of the American Medical Association.

Officers. — President, Vice-President, Permanent Secretary, and Secretary.

The President, Vice-President, and Secretary shall be elected annually, and shall serve at the meeting of the succeeding year.

Committees shall be appointed where necessary for the carrying out of any of the special purposes of the Association.

These resolutions have been signed by the following delegates: Dr. N. S. Davis, Chicago Medical Examiner; Dr. Jas. M. Halloway, Richmond and Louisville Medical Journal; Dr. Wm. H. McPheeters, St. Louis Medical and Surgical Reporter; Dr. W. R. Bowling, Nashville Journal of Medicine; J. Berrien Lindsley, Nashville Journal of Medicine; Dr. Greeneville Dowell, Galveston Medical Journal; Dr. Samuel Logan, New Orleans Journal of Medicine; Dr. S. S. Herrick, New Orleans Journal of Medicine; Dr. E. W. Jenks and Dr. Geo. D. Andrews, Detroit Review of Medicine and Pharmacy; Dr. W. S. Mitchell, New Orleans Journal of Medicine, and Dr. S. M. Bemiss, New Orleans Journal of Medicine. The officers, as follows, were unanimously elected:

Dr. N. S. Davis, President; Dr. W. M. McPheeters, Vice President; Dr. W. S. Mitchell, Permanent Secretary, and Dr. J. Berrien Lindsley, Secretary.

The following resolutions were unanimously adopted:

That a Committee on Foreign Exchanges be appointed, to consist of Dr. Parvin, as chairman, and the Permanent Secretary.

That the Permanent Secretary be instructed to correspond with such regular medical journals of the United States as are not now represented, informing them of the objects of the organization, and inviting their co-operation.

That a Committee, consisting of Drs. Bowling, Dowell and Andrews, be appointed on the Registry of Physicians.

That Dr. Halloway be appointed a Committee on Revision.

That the President deliver, at the next meeting, an address on the history, progress, etc., of Medical Journalism in this country, and that the members of the Association furnish to him such material and information as they may be able to obtain.

That beside the members already signing the constitution, all physicians connected with regular medical journals, be considered members upon signifying, in writing, to the Permanent Secretary, their willingness to subscribe to the foregoing articles of agreement, until opportunity be afforded them of signing said articles.

That the President be requested to announce to the American Medical Association the formation and objects of this Association.

That these minutes be furnished to the secular papers, with a request that they be copied.

That Dr. Halloway be appointed a committee to arrange a general plan of commutation between medical journals.

That the Committee on Exchanges be instructed to arrange some general plan for the establishment of agencies in all the principal cities.

There being no further business, the meeting adjourned.

MISCELLANY.

Chemistry of the Cinchona Barks.--Cincho-Quinine.

The chemical manipulation of the Cinchona or Peruvian Barks reveals the presence in them of quite a number of most remarkable, complex bodies. No vegetable production, except the poppy, affords such a marvelous combination of valuable medicinal principles as the *loxa* and *calisaya* barks, and no substances have been studied with greater care or more intense interest by chemists. Nothing short of the subtle chemical forces controlled by the Infinite One could construct from the elements of the earth and air a bitter principle like quinia, or those other agents associated in bark, so closely allied to it physically and chemically. A handful of the finely comminuted fibres of the yellow bark, which resemble physically a dozen other varieties, is

made to yield by the chemist, when treated with aqueous and alcoholic liquids and acids, a dark, bitter solution, unattractive in taste and appearance. If the process is skillfully conducted, or exhaustive in its results, there remains, beside the solution, a portion of woody fibre, inert and almost tasteless. It holds considerable coloring and some waxy matter, together with a little tannin; but the active chemical or medicinal principles have been removed, and are held in the dark liquid. The exhausted bark is not entirely worthless, for it may be dried and used as fuel. But what of the dark liquid? From this the chemist obtains, besides other substances, a portion of beautiful, white, silky crystals; not wholly of one distinct kind, but of several, all of which possess about equal chemical and therapeutical importance. No wonder it seems, to the uninitiated in chemical manipulation, a difficult work to perform. It is, however, quite easy to be thoroughly instructed. The first principle isolated may be the quinia. This is not held in the bark in its naked alkaloidal condition, but locked up in the form of a salt, with another principle called *kinic acid*. In the bark it is *kinate of quinine*. We isolate the quinia, tear it from its embrace with kinic acid, throw that away, force it into a kind of matrimonial alliance with sulphuric acid, and in this condition of *sulphate of quinia* use it as a medicine. This kinic acid marries into several other families, resident in the bark, prominent among which are *cinchonia*, *cinchonidia*, *quinidia*, etc. Precisely how many of these alkaloidal principles the different kinds of bark contain, is unknown; but it is safe to assume that there are as many as four others which, although not distinctly pointed out, are tolerably well recognized. These *kinates* are all *kindred* in nature, and all labor to the same end, when isolated and set to work as therapeutical agents in the human system.

In one hundred ounces of good yellow bark, we obtain about two and three-fourths ounces of quinia, and two ounces of cinchona, with variable amounts of the other principles, but less than the two named. It is to be regretted that we cannot remove the different families of kinates from the bark in their natural state of saline combination. It seems reasonable to suppose their action upon the system would be more salutary than in other forms. It is

easy to isolate the kinic acid, and these having the alkaloids, the kinates of quinia, cinchona, etc., can be reformed; but in these chemical changes so much disturbance to natural organic combinations is made, that, practically, we realize no marked advantages. It seems unnatural to force a natural alkaloidal base out of its association with an organic acid, and recombine it with a mineral acid. This we do in the preparation of the sulphate of quinia. However, as it has served so good purpose for many years, it is not best to quarrel with the theory.

All the alkaloids of bark possess about equal febrifuge and tonic properties, when isolated and administered in that condition. This has been proved over and over again by all competent chemists and physicians, from Drs. Gomez, Duncan, Pelletier, Caventou, down to the time of Liebig's researches, a quarter of a century ago, and from that time to the present by a hundred careful chemical and medical observers.

How the one alkaloid, quinia, came to supersede the others, and drive them into the background, is easily understood, when we remember that it was about the first that was distinctly eliminated, studied, and experimented with; and the *eclat* it acquired caused every thing else to be neglected. The natural bark, holding all the alkaloids, the quinia, cinchonia, quinidia, etc., has always been observed to produce more efficient and prompt results, both as a tonic and febrifuge, than the quinia, or either of the other principles in themselves; but holding also, as it does, tannin, gum, starch, fibrine, and coloring matter, all of which are medicinally interfering or inert, its use is rendered inconvenient and inadmissible in many cases. Beside, it is apt to produce disturbance of the gastric functions of an unpleasant character. Acting upon the idea that the natural alkaloidal principles of bark, in their simple, unchanged condition, separated from the gross, woody, and other matters, would better subserve all therapeutical ends than the barks themselves, or *any one* of the alkaloids separately employed, we have prepared CINCHO-QUININE.

Cincho-quinine contains no external agents, as sugar, licorice, starch, magnesia, etc. *It is wholly composed of the bark alkaloids.* 1st, quinia; 2d, cinchona; 3d, quinidia; 4th, cinchonida; 5th, other alkaloidal principles present in

barks, which have not been distinctly isolated, and the precise nature of which are not well understood. In the beautiful white amorphous scales of cincho-quinine, the whole of the active febrifuge and tonic principles of the cinchona barks are secured without the inert, bulky lignin, gum, etc. It is believed to have these advantages over sulphate of quinine :—

1st. It suits the patient better.

2d. Is not unpleasantly bitter.

3d. Is much cheaper.

4th. It meets indications not met by that salt.

Cincho-quinine admits of several pleasant forms of administration. 1st. It may be given in pill form, mixed up with some pleasant, inert substance. 2d. It may be spread upon bread and butter, and taken in that way. 3d. It may be given suspended in milk or syrup, or in sweet wine, or mixed with sugar. 4th. Where it is taken in one or two grain doses as a simple tonic, most patients will not object to placing it upon the tongue and swallowing it with the saliva. Its action will, in many cases, be promoted by using in connection a glass of weak lemonade, sour wine, or some slightly acid drink. If mixed with acid wines, or sour liquids of any kind, a great increase in bitterness is developed, not enough, however, to render it unpleasant to most patients. If eight or ten grains are placed in a glass of water, and a few drops of acetic acid added, a clear solution is produced, which is very bitter. It is doubtful if it can be placed in a form suited to hypodermic use. But few experiments have, however, been made in this direction.

In intermittents, cincho-quinine may be given in 5, 10, 20, or even 30 grain doses, the same as sulphate of quinine. As an introduction to the treatment of fever and ague with cincho-quinine, an ipecac, or other emetic, is often of the greatest service. Ten or twenty grains of cincho-quinine, or of sulphate of quinine, might as well, so far as medicinal effect is concerned, be dissolved in the contents of a waste bucket, as in a stomach loaded with food and the attendant juices. The remedy must act upon the walls of the stomach and the connecting organs, to produce constitutional effects.

In a recent visit to the wards of the United States Marine Hospital, Chelsea, Dr. Graves, the physician in charge,

politely invited us to thoroughly examine the numerous, intermittent patients, with reference to his treatment of this disease, it being based upon the use of emetics prior to administering the bark preparations. We believe the wards of no hospital in the world can show more cases of prompt and thorough recovery from the affection than this. It is not probable that the marked beneficial influence of the emetic is due alone to its work as an evacuator, but its general influence on the system admirably prepares it for the use of antiperiodics.—*Boston Journal of Chemistry.*

The Infection of Crime.

It is a noticeable phenomenon in the moral world, not only that local epidemics of crime and suicide occur from time to time, but that a certain kind of crime, or mode of killing, assumes temporary prominence in these epidemics. The more fantastical in horror be an evil deed, the surer is it to be followed by imitative repetitions. Let us see whether there be a physiological explanation of this fact.

Without pushing the argument of "moral insanity" as far as do some "counsel for the defence," who seem to hold that the mere commission of an unlawful act is in itself evidence of mental aberration—without even quoting the concession made by law to the church, in attributing temporary insanity to every suicide, so that he may have a christian burial—we hazard little in asserting that for the perpetration of the graver forms of crime, there must exist a morbid pre-disposition which may be characterized at least as unsoundness of mind. The man who deliberately takes his own or another's life follows an unnatural purpose, and thus far shows an unsettled mind, although in legal definition he may be sane. He who surrounds a causeless crime with circumstances of grotesque atrocity, though he also may satisfy the technical meaning of sanity, and justly suffer the legal penalty of his act, is nevertheless undoubtedly diseased in mind, physiologically speaking. Those perversions of impulse which, when developed to actual insanity, we call Pyromania, Kleptomania, Homicidal or Suicidal mania, have their minor degrees, ordinarily un-

der the control of reason and unsuspected in their latency, save, perhaps, as matters of subjective consciousness.

Now, we know that in perturbation of the mental functions the imitative faculty is apt to become unduly roused. We have all noticed the apparent contagiousness of hysterical convulsions in the female wards of hospitals; of epilepsy among patients subject to that disease; and past and present history teaches us, in the "possessions" of Loudon and Louviers, and in the various vagaries of religious and political fanaticism, that "moral convulsions," so to speak, are even more infectious in their nature. In either case a dormant pre-disposition is roused to action and emancipated from the control of the judgment by a suggestive example.

With regard to crime, this mischievous stimulous of example is held up to view by elaborately sensational reports in the public press. If some frenzied miscreant batter out the brains of his wife and children with a fence-rail, and afterwards burn their bodies, straightway some enterprising newspaper covers its first page with a florid description of all the disgusting details; the feast of horror is spread at every breakfast table throughout the country; and immediately fence-rails and incineration come into fashion, and domestic holocausts are the order of the day.

Or some original genius devises a new method of putting an end to himself, and at once the morning papers "Herald" to the "World" his achievement, with a similar result of calling out a host of imitators. Many a man may have a proclivity towards unprovoked homicide, or self-destruction, which would have remained latent were it not excited beyond restraint by the overdone sensational journalism of the day; nay, more, it may be safely said that no man free from such proclivity could relish the perusal of such details.

If there be reasonable grounds for what we have said we trust that the conductors of reputable journals will give it thought and be guided by a regard for the public welfare. For those vile weekly prints which exist only by pandering to the depraved appetite for horror of the worst classes of the community, mere counsel will not suffice, and we must await the time when their villainous incentives to crime will be recognized and suppressed by law.—*N. Y. Medical Gazette.*

Prolonged Anuria.—Cases of suppression of the urinary secretion, as in cholera, persisting for weeks and months, are not frequent, and their rarity equals their gravity.

A woman twenty-seven years of age, married but childless, after five months' suffering from amenorrhœa, and leucorrhœa, consulted Dr. Gallina, because she had not passed urine for twenty-four hours. Catheterism only yielded a few drops of coffee colored liquid, and for the suceeding eight days no more of it appeared. Application of leeches to the perineum, nitrate of urea internally, and warm baths were administered up to the twenty-fifth day. No effects having been produced, the patient consulted Dr. Albertini, at the Milan Hospital, who after two hours' minute exa m ination, found absolutely no lesion to explain this failure of secretion, nor any alteration resulting from it. Her general health had suffered in no respect. Prof. Rudolph being called into consultation, considered the suppression was due to amenorrhœa. Emmenagogues were administered, and the menses appeared. At the same time, six hundred grammes of urine were extracted by catheterism on the forty-third day, and the normal secretion became established without the least injury to health.—*Gazette Medicale de Lombardia, and Western Journal of Medicine.*

The Physiological Action of Picrotoxin.—M. Rober has recently been engaged in experimenting on this substance, which was obtained as long ago as 1812, by M. Boullay from the well known seeds of the Cocculus Indicus. The composition of picrotoxin is represented by the formula C_{20} $H_{12}O_8$ and its reaction is neutral. The conclusion at which M. Roeber arrives from his investigations is that picrotoxin is a powerful exciter of the medulla oblongata, or, perhaps, to express it more accurately, of all the nerve-centres which are situated in the medulla oblongata. Hence follows violent and long continued convulsions of the body generally, prolongation and ultimate stoppage of the cardiac beats, and acceleration of the respiration, which is finally arrested by cramp of the glottis and of the diaphragm. Though the drug does not appear to be at the present available as a therapeutic agent, it is interesting as affording and example of the action of a poisonous substance on a particular section of the nervous system.—*Lancet.*

A Caution to Prescribers.

[The following communication from Prof. Chas. A. Joy conveys a caution worthy of the serious attention of every practitioner.]

EDITORS MEDICAL JOURNAL:

There is great danger in prescribing oxidizing agents in the same compound with the Iodide of Bromide of Potassium.

Chlorate of potash and Iodide of Potassium dissolved together in water crystallize out separately, but these two salts taken into the stomach re-act upon each other, and the resulting Iodate of potash acts as a violent poison.

I presume that chlorate of potash and Bromide of potassium would behave in a similar way, and I should be afraid to mix caustic potash or any alkali with the Bromide of potassium. C. A. J.

Brainard Medical Society.

Society met in Miramac, Indiana, June 2, 1869. Members present, Drs. F. B. Thomas, H. Kittinger, G. W. Reddich and P. H. Leavitt, Miramac; L. D. Glazebrook, San Pierre; J. B. Hoag, Knox; Wm. Perry, North Judson; Jas. Tolerton, Rochester; J. W. C. Eaton, Pulaski; W. T. Cleland, J. H. Smith, A. R. Thompson and R. W. Jackson, Kewana, and I. B. Washburn, Star City.

Officers elected at the paevious meeting were:

J. W. C. Eaton, President; I. B. Washburn, Secretary; J. H. Smith, Treasurer; F. B. Thomas, P. H. Leavitt and R. W. Jackson, Censers.

Dr. Eaton, before taking the chair, read an able and instructive address.

Dr. Hoag read an essay on "The Application of Consevative Medicine to Hygiene.

The Society was divided into five Sections. The members chose the sections to which they wished to belong, and elected the chairmen of the same as follows:

ANATOMY, PHISIOLOGY AND SURGERY.—Dr. F. B. Thomas, Chairman; Glazebrook, Tolerton, Hoag, Cleland and Leavitt.

TAEORY AND PRACTICE OF MEDICINE.—Dr. L. D. Glazebrook, Chairman Washburn, Smith, Perry, Leavitt and Thomas.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.—Dr. T. B. Washburn, Chairman; Tolerton, Hoag, Thompson, Smith, Thomas and Glazebrook.

EYE AND EAR.—Dr. J. B. More, Chairman; Glazebrook and Thomas.

Drs. Hoag, Thomas and Glazebrook were appointed a Committee on Resolutions on the death of Dr. A. M. Pearson, of Miramac.

Adjourned to meet in Miramac, Indiana, July, 7, 1869.

I. B. WASHBURN, M.D., Sec'y.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JULY 1, 1869.—No. 13.

TRANSLATIONS.

Anatomical and Physiological Observations made upon Decapitated Subjects.

BY M. C. ROBIN.

From Robin's Journal de Physiol, etc.

I—The Condition of the Cervical and Cephalic Veins.

When the cervical and cephalic veins of decapitated subjects are examined several facts are observed which possess a certain degree of interest in a physiological point of view. Upon the cut surface there may be seen veins clearly cut whose walls are there more or less depressed. The corresponding arteries have their cut extremities retracted to the depth of about a centimetre into the thickness of the tissues.

But what deserves especially to attract the attention of observers is this: that the internal jugular vein incompletely retracted upon itself has its cavity full of air. This re-

placed the blood at the moment of the abrupt pouring out of the liquid; the air remains there, as is revealed by dissection, by reason of the habitual state of tension of the cervical aponeurosis due to its insertion, and which maintains the veins of the neck in a state of distension above the os hyoides. This has been noticed especially by M. Malgaigne (*Anatomic Chirurgicale*, Paris, 8vo, 1859, 2d edit: t. II., p. 128), in discussing the anatomical observations upon this subject made by M. Bérard (1830), De Grusse (Thése 1849), Richet, etc. Dissection shows, sometimes, also, a little air, in bubbles, mingled with the blood in the trunks of the principal branches which empty into the internal jugular, such as the facial and temporo maxillary veins. The same also sometimes occurs in the veins which surround the transverse apophyses of the first cervical vertebræ, and communicate with the *internal jugular* by means of the inosculating branch which returns from the last to the superior part of the *posterior jugular*.

The most constant fact actually to be noticed consists in the presence of air in the fossa of the jugular vein, in the lateral and other sinuses of the base of the cranium, as well as in the two longitudinal sinuses.

From thence large bubbles of air may be followed in the veins of the cerebral and cerebellar pia mater, and even into several of their subdivisions, along the fissures separating the convolutions.

In the last subject examined I discovered, one hour after death, large bubbles of air in the right sinus, as far as the vena Galien, and in the two large choroid branches. I have never seen them in the veins of the ventricular walls, nor in those which plunge into the gray and white cerebral substance, whatever their volume may have been.

Thus air takes the place of blood wherever the anatomical arrangements are such that the organs of the surface of the body cannot be depressed upon the veins in proportion as the liquid escapes from the vessels abruptly opened. In

place of blood, which, in bodies of subjects dead from disease, fills, more or less fully, the vessels, air, alone or mingled with blood, is found under the conditions of death examined here. As to the smaller intra-cranial vessels, other than those referred to, they remain (as in dead bodies generally) more full of blood relatively than those in the extra-cranial regions, the incompressibility of the cranial case, in reference to atmospheric pressure, opposing an obstacle to their retraction, and consequently to the expulsion of the blood in the large venous trunks. This fact is observed, as is well known, even in men and in animals dead from hæmorrhage in consequence of arterial wounds of the limbs.

In this last relation especially, the intra-cranial vessels, other than the sinuses, are not, in decapitated subjects, removed from the influence of atmospheric pressure, as in individuals dead from disease. There is found, indeed, in the first, air, in the place which was occupied by the cephalo-rachidian liquid around the spinal marrow, in the posterior sub-arachnoidean space, and more or less in the spaces at the base of the cranium.

Finally, it must be added, to conclude what refers to the condition of the veins, that the trunk of the vertebral vein adherent to surrounding parts, is slightly retracted upon itself and contains air.

I recall very clearly that my attention was attracted to the presence of air in the cranial sinuses and in the veins of the pia-mater, in 1844 and 1845 by MM. P. Bérard and Denonvilliers. Since then I have verified these facts every time I have had occasion to dissect decapitated persons, and three times in particular, during the last two years, I have vainly sought their indications in treatises of anatomy and physiology. It has been equally impossible for me to discover where Bérard (*Eléments de Physiologie*, Paris, 1858, 2d Edit., t. II, p. 346) has drawn the elements of the following phrase, the only one alluding to the subject under dis-

cussion which has come within my knowledge: "Examine," says Bérard, "the head of a decapitated subject, as Beclard, Abercrombie and Professor Bérard have done, or even yet examine the cranial cavity of a person dead of hæmorrhage and you will find there, always, a large quantity of blood."

It is perfectly true that the intra-cranial venous vessels of subjects decapitated, are not absolutely drained of blood. There remains some blood in the smaller veins of the pia-mater, equally in those penetrating the gray and the white substance. But this quantity is sensibly less than in the majority of subjects, dead of different diseases and more or less emaciated, destined for dissection. Moreover, as we have just seen, the cranial sinuses are full of air, or contain more air than blood; the same is true of several of the veins which empty into them, and many of the branches of these last contain bubbles of air, more or less numerous, mingled with blood, filling them for a certain length, and separated from each other by little columns of blood.

II—The Conditions of the Cervical and Cephalic Arteries—Physiological Consequences of this Condition.

In connection with MM. Legros and Goujon we have observed, in two decapitated subjects, another series of facts more unexpected than the preceding, concerning the presence of air in the vessels. We saw air mingled with blood in the arteries of the head, in the cerebral and cerebellar arteries as far as the arterioles of the pia-mater. M. Legros particularly, investigated these facts with the greatest care in reference to the experiments which he had made in connection with M. Omimus, upon arterial circulation (See *Journal of Anat. and Physiol.*, 1868, p. 371) upon the head of a decapitated person whom I dissected two hours after execution, in September last, with especial reference to the study of the state of the vessels. I determined that the internal and external carotid arteries, incompletely retracted upon themselves, contained frothy blood in which the vol-

ume of air surpassed, considerably, that of the blood. All the branches of the arterial hexagon (circle of Willis) of the base of the cranium, very sensibly retracted upon themselves, contained blood mingled with a certain number of air bubbles. The origin of the ophthalmic artery was in the same condition. The arteries originating from the anterior portion and from behind the hexagon were considerably retracted upon themselves without being completely emptied of blood, and their trunks had the appearance of little brownish resistant cords about a millimetre and a half in thickness.

Upon the two other decapitated subjects which I had examined previously with MM. Legros and Goujon, the arteries springing from the hexagon were a little less retracted, and contained bubbles of air, at least equal in quantity to that of the blood with which it was mingled.

The trunks of the principal branches of the external carotid contained blood mingled with bubbles of air. This fact was very striking in the maxillary, and especially in the middle meningeal artery, whose branches contained bubbles of air almost up to the middle of the sides of the cranial arch.

Section of the vertebral arteries made nearly at the level of the transverse apophysis of the fourth cervical vertebræ showed at each side an open orifice alongside of that of the vein: the artery incompletely retracted upon itself in consequence of its adhesion to surrounding organs, contained more air than blood nearly up to the basilar trunk. The latter, much more retracted upon itself than the preceding arteries, contained, like the branches of the hexagon, little columns of blood separated by bubbles of air. The same was true of the cerebellar arteries, but only at their origin.

It is perfectly easy to comprehend under what point of view these facts are worthy of interest.

All physiologists know the remarkable experiments pro-

posed by Legallois, and so well executed for the first time by Brown-Sequard (*Journal de la Physiologie*, Paris, 1858, 8vo, p. 119), which is thus described:

"I decapitated a dog, *taking care to make the section below the point where the vertebral arteries penetrate the osseous canal.* Eight minutes after, pinching of the skin being without effect, I applied a galvanic current of very considerable intensity, to the exposed medulla oblongata, avoiding carefully the passage of the current through the adjacent part. He manifested no movement. The conductors applied to the protuberence could produce no effect. Ten minutes after the cessation of the respiratory movements of the nostrils, of the lips and of the lower jaw, I fitted to the four arterial trunks of the head canulæ which were connected by tubes of caoutchouc with a brass cylinder, by means of which I injected blood charged with oxygen by the aid of a syringe. In two or three minutes, after some slight disorderly movements, I detected movements of the eyes and of muscles of the face which seemed to be directed by the will. I prolonged the experiment a quarter of an hour, and during all that period these movements, apparently voluntary, continued to take place. After having discontinued the injection these movements ceased, and were soon replaced by convulsions of the eyes and of the face, by respiratory movements of the nostrils, of the lips and of the jaws, and, finally, by the tremors of the death-struggle. The pupil dilated and contracted as in ordinary death.

This experiment, adds Brown-Sequard, demonstrates positively the possibility of the return of the vital properties and of the functions of the encephalon under the influence of blood charged with oxygen."

There can be no doubt that this experiment, made upon man under conditions analogous to those in which Brown-Sequard was placed, would give results of the same order,

as to the phenomena of central innervation, and of motor excitation in particular.*

It is very certain that movements of the lids and lips may be determined under these conditions, like the return of the nervous tissue to reflex actions, if not to voluntary movements, by tickling or pinching the skin at this or that point of the face; movements obtained in an analogous manner to that which Brown-Sequard (Comptes rendu de l'Academie des Sciences, 1851, t. XXXII, p. 856), has perceived whilst making experiments of this kind upon the posterior portion of the bodies of rabbits.

But it will be seen after what has been already said of the presence of air in the vessels of the neck and of the cranial cavity, that contrary to what some physiologists have thought from the indications of M. Velpeau (Leçons sur la physiologie du System Nervoux, Paris, 1866, 8vo., p. 460,) this experiment could not be made upon the head of a decapitated person. It could not succeed, or at least furnish conclusive results, as upon the body of a man killed by balls striking below the neck. Under such circumstances only, which it would not be impossible to meet, section of

---

*It may be added that this experiment, and others likewise, which Brown-Sequard has described in this same work, demonstrate the functional anatomy of the central and peripheral nervous cells and tubes, in the same manner as that of other species of anatomical elements whose properties are manifested while the characteristic muscular condition of the state of organization persist, and the relations of the element with the blood permit its incessant molecular renovation. It is sufficient that these relations cease, in order that the elements should lose their properties, and these which would not return, if this state were maintained, would re-appear just in so far as these relations were re-established, before the chemical decomposition of this or that principle in the substance of the element may have taken place. Then, whilst it is yet too slight to modify the form or the structure of the elements, this decomposition is, nevertheless, sufficient already to destroy the existence of the particular molecular state which is essential to the state of organization: in order that consequently the conditions of this continuous renovation should no longer exist: aside from the accomplishment of which no other property of the organic series can manifest itself.

the neck might be performed, *below the level at which the vertebral arteries penetrate their canal*, conditions of which Brown-Sequard has not misunderstood the importance.

It is indispensable indeed to divide the arteries at one point, and even to effect it in such a manner that the retraction of their walls may be accomplished in proportion as the blood pours out, so that this last may not be partially filled with air as occurs in the case of guillotined subjects, through the vertebrals.

It is likewise so with the carotids which, instantaneously and simultaneously cut transversely and entirely, lose immediately their blood under conditions which are no where met with outside of this mode of capital execution.

Now for the vertebrals this retraction is not possible, nor at least is not accomplished except after a prolonged traction exercised upon the surrounding layers of tissue throughout their whole extent, in the foramina at the base of the transverse cervical apophyses. Cut at one point of this place, they invariably permit the air to enter in place of the blood which escapes, and by reason of the incompressibility of the cranial vault, this air accumulates thence in the intra-cerebral arteries which empty themselves more or less in different individuals.

Although the conditions are not the same in this relation for the carotids, it is however certain that, in decapitated subjects they are not retracted upon themselves up to the point of complete obliteration, and that they contain air which extends into these or those branches as we have already seen.

Hence the impossibility of making into the head of a decapitated person, a few minutes after death, an injection capable of giving results such as those that M. Brown-Sequard has obtained under the conditions which he has noted.

It is well known indeed that in every injection made into the arteries or veins, one of the essential precautions to be

taken is to prevent the entrance of air before the column of liquid is introduced. Otherwise, as occurs both in the living and the dead, the presence of bubbles or of a column of air is seen in the little vessels or in the capillaries opposing an obstacle to the progression of the liquid, and soon the continuation of the pressure induces ruptures of the tubes with foci of extravasation, or with infiltration of the fluid into the elements of the surrounding tissues. Hence artificial apoplectic extravasations going in this case counter to the intention of the experiment; for the result would not be certainly comparable to those which experiments made upon dogs have furnished, and from thence one would be led to conclude dissimilarities which do not exist between the fundamental acts of innervation. The results might even be negative, without permitting the deduction of any logical conclusion therefrom.

Thus the circumstances in which the vessels are cut in decapitated subjects are such that the air takes the place of the blood which jets out; and that, too, not only in the veins but likewise in the arteries into which blood ought to be forced in order to replace the nervous elements in conditions of internal constitution such that their extinct properties may reappear.

The conditions which render the experiment valuable and conclusive fail then here, and those which exist constitute in this particular case difficulties impossible to surmount in order to attain the desired result. This is moreover but one more illustration among those which show how often, in the conception and in the execution of every experiment, it is necessary to take into consideration the conditions of accomplishment of the phenomenon which one endeavors to modify in order to analyze it more clearly, and how, in this respect, no intellectual superiority can be substituted for the observance of these conditions of organic, chemical and physical order.

It may be considered, however, as certain that the phe-

nomena of central innervation placed in evidence by the movements observed in the dog during the experiment of M. Brown-Sequard, and those which could be established in man by placing him in similar conditions could not be regarded as associated and co-ordinated into thoughts becoming motors of the voluntary execution of this or that movement.

For those who have studied, as have physiologists and physicians, the conditions, as well intrinsic as extrinsic, necessary to the regularity of intellectual acts, the solitary fact of the absence of the cephalo-rachidian liquid in the head separated from the trunk, suffices independently of questions of pressure and of the regularity of the course of the blood injected, to lead to the belief that the acts of cerebral innervation which are manifested then, are hardly comparable but to those of which men do not preserve the recollection, and which take place, for example, at the beginning of the cessation of a syncope, as also in delirium, during an access of fever, etc.

[CONTINUED IN NEXT NUMBER.]

SOCIETY REPORTS.

Chicago Medical Society.

FRIDAY EVENING, May 28, 1869.

Regular weekly meeting of Chicago Medical Society, President Bogue in the chair. Proposals for new members being in order, Dr. A. I. Brackett was proposed by Drs. Schmidt and Paoli, and referred to board of censors. Discussion for the evening being now in order, viz., "What is the best treatment of Leucorrhœa," Dr. Trediche stated the

disease might arise from a cancerous or syphilitic diathesis; the discharge might proceed from the cavity of the fundus body or neck of the uterus—from the vagina or pudenda; the disease might be functional or inflammatory; acute or chronic. Treatment: where there is plethora, saline purgatives, or abstraction of blood. Mild vaginal enæmas are best adapted in the acute form. In the chronic variety, where the discharge is excessive from the uterus, both constitutional and local measures are indicated, viz., ferruginous tonics and supporting diet, opium, conium, and hyoscyamus to allay pain. Locally, argent nitras in solution or solid stick to the part affected; decoctions oak bark and blisters to the sacrum, where the cause was displacement or procedentia uteri, to reposit the organ. Dr. Merriman stated leucorrhœa was catarrhal in its nature, and requires constitutional treatment; that urethal, etc., discharge proceeds from the cavity of the uterus or vagina; that it should be treated as a nervous disease: iron, which is an astringent, also strychnine, nux vomica and arsenic, which have control over the peripheral, nervous filaments and arterioles; that the treatment should be persistent. As the disease becomes local the most soothing medicines are indicated, viz., the warm sitz baths, vaginal anodynes and astringent enæmas, and insufflation of the powder of bismuth. Dr. Gray believes it a local disease, and has treated it as such with success. Dr. Foster stated that in mechanical displacement of the organ, giving rise to leucorrhœa, to reposit the organ was the only remedy, that where the disease approaches gonorrhœa local anodynes and astringents cure. Dr. Mitchell stated where the disease was incident to those local affections of the skin, arsenic was a good remedy. Dr. Paoli stated leucorrhœa was not a disease but a symptom; that we seldom saw it in the acute form; that the chronic variety was most persistent. The patient is generally anemic, and prone to pulmonary affections; that the symptoms follow frequent abortions, metritis and mechan-

ical displacements, procidentia uteri, etc. Dr. Fitch stated the disease may be either local or constitutional and should be treated accordingly; that there was a want of tonicity in the system, and a watery condition of the blood. The constitutional treatment should consist of iron, general tonics and liberal diet. In cervical discharges prefers the local use of solid argentinitras within the cervix, but never injections into the uterine cavity; where discharges were offensive had used vaginal enæmas of solution permanganate of potassa. Society adjourned.

HIRAM WANZER, *Secretary.*

North Iowa Medical Society.

The North Iowa Medical Society held its eleventh annual session at Monona, on Wednesday, the 3d of June. Meeting called in the office of Dr. Scott. Roll called—Minutes of last meeting read and approved.

Drs. Lewis L. Hazeltine, of McGregor, Herbert S. Hill, of Elkader and Dixon Alexander, of Fayette, were duly elected members of the Society.

Dr. Scott presented a little girl with a severe gun-shot wound of the hand, which he dressed, assisted by Green, Lewis and Hazeltine; the two middle fingers amputated through the metacarpal bones

Dr. Andros introduced a patient with chronic periostitis of the bones of the wrist. Most of the members gave their diagnosis and treatment in writing.

The Society then adjourned to meet at one o'clock, P. M., in the Masonic Hall. Meeting called at the appointed hour.

Dr. D. Mason, of Prairie du Chien, Wis., was elected Honorary Member.

A complaint was presented against Dr. J. Hicks, of Monona, which was referred to the Board of Censors, to draft resolutions to present to the meeting. Dr. Hicks was notified by the Secretary to appear and answer to the charges preferred against him. He would not appear.

The Society then passed the following resolutions :

WHEREAS, Dr. J. Hicks, of Monona, a member of this Society has been convicted of a *gross* violation of the code of the National Medical Association, said code being adopted by this Society, therefore, be it

Resolved, That he is hereby expelled from membership from this Society.

Dr. D. W. Chase, of Elkader, reported a case of progressive locomotor ataxy. Dr. Lewis a case of encephaloid disease of the forearm in a girl thirteen years of age, the diseased radius and ulna, with some of the enceph-

aloid formation was exhibited. He also reported a case of the continued use of chloroform for eight hours. Dr. Scott one of six hours.

Dr. Green a case of pyœmia, with many large diffused abscesses which discharged, in all, over two quarts of pus; the patient recovered. Dr. Andros a case of abscess of the appendix vermiformis.

Dr. Earl a case of acute meningitis, accompanied with very unusual symptoms. Dr. N. H. Knowles exemplified Dr. Earle's case by one with similar symptoms, which resulted in death. A post mortem revealed also spinal apoplexy.

Dr. Earl one of organic disease of the brain, produced by functional disease of the uterus.

Dr. Scott read a very interesting and instructive paper upon various subjects pertaining to the medical profession.

Dr. Andros took his text from the modern bible: "Suffer not little children to come unto me," read a lengthy, true, and able discourse upon the common crime of criminal abortion; showed to what an alarming extent it is now carried on, the symptoms and treatment for the different stages; the danger attending it and the effect it had upon the patient, and upon the community at large; showed by statistics that the American race is fast running out.

Many interesting cases were related, and then proceded to election, which resulted as follows:

D. W. Chase, of Elkader, President.

W. C. Earl, of Wawkon, Vice President.

J. S. Green, Postville, Secretary.

J. T. H. Scott, Monona, Treasurer.

Censors, Andros, Alexander and Lewis.

Delegates to the American Medical Association, F. Andros and N. H. Knowles.

Delegates to tho State Medical Society, Scott, Hill and Hazeltine.

Essayists, N. H. Knowles and J. S. Green.

The President was excused from reading his address for the want of time, as many of the members were compelled to leave on the train.

Meeting adjourned to meet at the City of McGregor, on the first Wednesday of June next. J. S. Green, *Secretary.*

Wines and Liquors for Medicinal Use.

Attention is directed to the advertisement of C. H. Swain & Co., in the advertising pages of the Journal. We can confidently recommend this firm as reliable and prompt in their business relations, whilst their thorough acquaintance with *spiritual matters*, long experience and integrity entitle them to a goodly share of public patronage. If alcohol, in any of its various preparations, is to be used at all in professional practice, it is certainly of the highest importance to know exactly *what* is used, precisely as with any other medicament.

ORIGINAL COMMUNICATIONS.

EDITOR CHICAGO MEDICAL JOURNAL:

DEAR SIR—In the May number of your valuable paper a letter appears signed "Geo. J. Zeigler, M.D.," in reference to nitrous oxide.

As my alleged connection with this person in regard to the preparation of this article has caused me considerable chagrin, you must allow a professional brother a little space in your paper, to relieve himself from the odium which has been fastened upon him.

About eighteen years ago my acquaintance began with Mr. Zeigler, who was then employed in the hair-dressing establishment of Mr. Pollard, in this city, and I lost sight of him for some years, when my acquaintance was renewed with him, he being, at that time, pulling teeth and shaving, at Tenth and Arch streets.

Mr. S. S. White solicited me to assist Zeigler in procuring a *patent* upon nitrous oxide, and, notwithstanding my earnest protestations, did actually proceed to Washington, apply for a patent, procure machinery, etc., at an expense of over $1,000, and in order to achieve success (at the command of Zeigler) began experimenting upon dogs, having, forty dogs at one time in the back room of his building at Arch and Sixth streets. The place was called a "Dog Hospital." It was a cruel way to treat the unfortunate canines. They were all suspended by their tails, and he (Zeigler) injected the gas *per anum*.

To those who know me intimately, I need not say that I would not do any thing so unprofessional as to attempt to secure a *patent* upon ideas as old as Sir Humphrey Davy.

I deny, most emphatically; I owe it to my professional char-

acter to do so, that I gave any counsel to either Zeigler or White in this business! On two or three occasions White induced me to re-write and re-spell Zeigler's articles. I did not receive one cent pay for it. Mr. Zeigler is, as far as I know, a worthy mechanic. "Curling Hair" is a respectable occupation when legitimately performed. But I do most heartily protest against the charge of assisting either Ziegler or White in their operations.

Yours, truly,

Geo. R. Welding, M.D.
1372 N. Eleventh St., Philadelphia.

MISCELLANY.

The Microscope in Sterility.

[Extracts from a paper read at the Oxford meeting of the British Medical Association in August, 1868, and subsequently read before the New York Medical Society on the 7th of December, 1868. Printed first in British Medical Journal in November, and reprinted in New York Medical Journal in January, and made into a pamphlet from this reprint.—*Nashville Journal.*]

BY J. MARION SIMS, M.D.

How often have we heard it said—how often have I said it myself—"An operation is necessary in this case, because the canal of the cervix is too small to permit the easy entrance of the semen!" Now, these important questions cannot be determined with any degree of accuracy in this hap-hazard manner. For it is not always necessary to incise the cervix uteri, simply because it does not easily admit the passage of an ordinary sound; nor, on the other hand, are we justified in condemning an operation, simply because the sound can be passed easily. In other words, a very small os does not call for operation, nor does a larger one always forbid it. Do you not think, then, that a great service would be rendered, if we could deduce this question of operation, or no operation, from the broad domain of spec-

ulative opinion to the narrow path of absolute scientific certainty? There is nothing easier, for the microscope accomplishes this in the most perfect manner imaginable. It settles the question of operation, or no operation, in an instant, leaving nothing whatever to be guessed at and nothing to be desired.

Is it surprising that positive knowledge of this sort should meet with opposition among honest, earnest cultivators of medicine? Not at all. For it is ever so with any great truth. It must be first opposed, then ridiculed, after a while accepted, and then comes the time to prove that it is not new, and that the credit belongs to some one else. The truth here announced has had its day of opposition, and it must now soon take its stand as established and acknowledged.

On the subject of the microscopic examination of the utero-vaginal secretions, I have been misrepresented, maligned, and positively abused by a few, both abroad and at home; and I have been misunderstood by many who have not taken the trouble to read, to investigate, to think and to reason for themselves. And, Mr. President, under these circumstances, I cannot thank you too much for the high privilege of appearing here to explain and to defend my position by laying facts in the case before this learned Society, this great gathering of my countrymen, whose decision, I am sure, will be in accordance with truth and justice.

We may all differ honestly about abstractions, and theories, and mere opinions; but when it comes to facts and figures, there cannot long be a great difference among men of good common sense, with honesty of purpose in pursuit of truth. I have never yet been afraid of truth, however much it may conflict with prejudices, find it where I may; nor do I ever expect to see the day that I would fear to publish my convictions on any matter of professional importance, be the character of the opposition what it may; and, particularly, when I feel that these convictions are based upon facts that are immutable, and lead to results of the gravest importance to the honor of medicine, and to the advancement of knowledge. Whatever gives to any department of medicine greater exactitude, helps to raise it to the dignity of a science. And this is what I claim to have done with the microscope in this direction.

The microscope has done, and is doing, a great work in

medicine, as well as in the collateral sciences. But I know of no field in which it will be of more practical use than in the treatment of the sterile state. For, where every thing was a short time ago in doubt and confusion, all is now made clear by this wonderful instrument. Even in this day there are many honest cultivators of medical science, who do not believe in the value of the teachings of the microscope.

M. Velpeau died, having no faith whatever in its practical utility. A few years ago I was one of those benighted scoffers who believed it to be merely a scientific toy, with which to while away leisure hours. Fortunately, my ignorance was dispelled, and I now look upon the microscope as an essential to the daily duties of the physician.

With these prefatory remarks, I now beg leave to give you some illustrations of its use in treatment of the sterile state.

In the investigation of any case of sterility, there are three questions that must be settled at the outset, if we expect to treat it understandingly.

1. We must be sure that we have semen with spermatozoa.

2. We must ascertain if the spermatozoa enter the utero-cervical canal.

3. We must determine whether the secretions of this canal are favorable or not to the vitality of the spermatozoa.

For, if the semen does not contain spermatozoa, of course the uterine condition does not call for any treatment whatever. But if it does contain spermatozoa, and if they do not enter the cervical canal, then there is the question of operation or not, to permit their entrance.

On the other hand, if we should find spermatozoa in the cervical canal, then, as a rule, no operation will be needed; and if we should find them there, all or nearly all dead, then it is evident that the secretions of the utero-cervical canal poison them, and therefore the physical condition, giving rise to this abnormal secretion, must be searched out and treated.

The present advanced state of physiological knowledge warrants us in saying that conception is impossible without spermatozoa; and it is impossible if the spermatozoa can not pass into the cavity of the uterus; and, to these acknowledged truisms, I must add another, viz., that it is

equally impossible if they die in the cervical canal, or are dead when they reach the uterine cavity. It is, then, self-evident that these three points must be determined—it matters not what other complications may exist. Fortunately, as I have said before, they are all easily and quickly settled by the microscope. Without the microscope, it is impossible to determine either of them. Without the microscope, then, our treatment of the sterile state is simply blind empiricism. With it, our diagnosis becomes absolutely certain, and our treatment, at least rational. What, then, are the first steps in this investigation? How can we begin? Where shall we begin? Now, as it is upon this very point that I have been so stigmatized, I will tell you exactly how I manage this delicate affair.

Given a case of sterility for investigation, the physician examines the state of the uterus and its appendages. His patient may have a frightful dysménorrhœa, a flexed cervix, a contracted cervical canal, something that would possibly prevent the passage of the semen to the cavity of the uterus. He may feel convinced, in his own mind, that conception can not take place unless some surgical operation be performed—perhaps incision of the cervix uteri. This operation is usually done to permit the passage of the semen into the uterine cavity. But in this, or in any case, what right have we to say that the semen does not or cannot pass into the cavity of the uterus? We must not take it for granted that it does not, simply because the os seems to be small; for we know that cases are recorded where conception occurred when the os barely admitted a small size probe; and we know very well that spermatozoa now and then pass along the Fallopian tubes, which ordinarily admit a bristle. If the semen enter the cervical canal, we may lay it down as a rule, that a dilation of the cervix by incision, or otherwise, is not necessary; but if it do not, it may be necessary. We may perform any rational operation for the relief of suffering, and for the restoration of health; but I insist that we have no right to perform any operation, or to institute any treatment whatever, solely with the view of cure of the sterile condition, till we have first settled the three propositions, above laid down, touching the presence and viability of the spermatozoa. To find out all at once, and, with the least delay and trouble, I usually say to the husband or wife, as it may be, "It is very important, before

instituting any treatment, to be sure that the seminal fluid enters the neck of the womb, for without this conception is impossible. We must also ascertain if the uterine secretions kill the semen; if so, a certain treatment will be necessary. If you will, then, send your wife here or come with her any day, five or six hours after coition, it will be easy to settle these points at once." In nineteen cases out of twenty, the wife presents herself the next day. The speculum is introduced (and when I say the speculum, I always mean the one that bears my name), and some vaginal mucus is removed by the syringe, and placed on an object-glass. Then some cervical mucus is drawn out and placed on another object-glass. These two specimens are then examined under the microscope. If we find spermatozoa, well and good; but if we find none, neither in the vaginal nor cervical mucus, our fears are at once aroused. What then is to be done? I simply say that I am not quite satisfied with the examination, and would like to see the wife again, at some future time, under the same circumstances. But suppose we find no spermatozoa on this second examination? Then two questions immediately arise: either, that there are no spermatozoa, or that the semen has all passed off before the case came under observation. Sometimes the semen is all instantly thrown off by the vagina, and then it would not do to pronounce the husband sterile until we are sure of a specimen of his semen for investigation. If I fail to satisfy myself on this point, I then explain the possibility of the semen all passing off in the act of rising and dressing, and show the absolute necessity of making the examination half an hour or so after coition, and before the erect posture is assumed. When the subject is presented in this plain, practical manner, and treated seriously, no man or woman of sense could oppose it; and with me, it has never, in a single instance, been objected to. When I am sent for to make examination, if I find in the vagina a fluid with the characteristic seminal odor, I am satisfied with the microcoscopic examination. I have never, in but two instances, been compelled to resort to Mr. Curling's plan, of asking the man to squeeze a drop of mucus from the urethra, on a bit of glass, immediately after sexual intercourse. But this is sometimes necessary; it is well to remember it.

If we eventually find that the semen contains no spermatozoa, then all uterine treatment is at an end. But if we are at last satisfied that it contains spermatozoa, then we must determine if these enter the cervix uteri, and if so, do they there find a fluid favorable to their existence alive? And all this can be done only by the microscope.

The question of the entrance of the semen into the cervical canal, and of the effect of its secretion upon the spermatozoa, can be fully and satifactorily ascertained only during a very brief period. We are sure to make a mistake if the microscopic examination be made just before the return of the menses; and why? Because, there is always a certain amount of fullness of the uterus—of engorement, so to speak—which precedes the menstrual flow; and the cervical canal may not admit the semen from mere turgescence of its walls. Besides, at this time, its secretions are almost sure to kill the spermatozoa even if they should happen to enter this canal.

Physiologists are generally agreed that conception takes place during the week following menstruation. Avrard says we have fourteen days of active uterine life and fourteen of uterine hypnotism. He says that conception can occur at any time after menstruation up to the fourteenth day, counting from its commencement. For instance, if menstruation should last for three days, then we would have eleven days for the possibility of conception. But if menstruation should last eight or nine or ten days, then we would have respectively but six or five or four days as the time possible for conception. After this time, the uterus, according to Avrard, lapses into the hypnotic state, when conception is impossible. While I am disposed to accept Avrard's dictum as the rule, I think I have seen exceptions to it, if we can always depend upon testimony seemingly reliable. Be this as it may, I am sure of this fact: if we wish to determine the effects of the cervical mucus upon the spermatozoa, we must make the experiment during the week that follows menstruation. About the fifth or sixth day after the flow is the best moment; for then the uterus is in the most favorable condition. The cervical mucus, which just before menstruation was perhaps thick and opaque, then becomes clear and translucent. If, by examination made at this particular period, we should find spermatozoa in the cervical mucus, we could safely say that it

will not be necessary to incise the neck of the uterus. But if the sperm do not enter the canal, then the probabilities are in favor of the necessity of some surgical interference. The semen may enter the cervix in great abundance, and we may find the spermatozoa all dead, even but a few minutes after coition. Then, as said before, we must find out the source of the poisonous secretion, and remedy it; for a vitiated secretion shows some organic condition requiring a special treatment.

When I wish to examine the action of the cervical mucus upon the spermatozoa, I order sexual intercourse in the morning—the dorsal decubitus to be retained for an hour afterward; and I expect a visit from my patient four or five or six hours after coition. Sometimes we find spermatozoa in great abundance in the cervical canal and not one living. (I have occasionally examined the mucus, six, eight and ten minutes after coition, and found all the spermatozoa dead.) Sometimes, we find half of them dead; again, only a third, again, two-thirds. Sometimes, in one portion of the mucus, every spermatozoön is dead; while, in another portion of the same sample with fewer epithelial scales, we may find them alive. Now and then, after treatment for a month or more, I have found the mucus drawn from the lower segment of the cervical canal full of living spermatozoa, and I have supposed that the case was cured; but when I came to examine that drawn from the upper segment of the canal, near the os internum, they were nearly all dead. This was evidently because the mucous membrane lining the lower segment of the cervix, being more easily reached and more thoroughly treated, had assumed a healthier character, and consequently its secretion was restored to a normal condition; while that higher up, and more difficult to reach, had not been so much improved, and hence its secretion was still abnormal—a condition requiring further treatment.

The vaginal mucus, by its natural acidity, kills very quickly every spermatozoön. I do not remember to have found one alive in the vagina, except when the examination was made very soon after coition; when, indeed, the vagina was full of semen but slightly mixed with other secretions. Examined three or four hours after intercourse, the spermatozoa found in that portion of the mucus of the vagina adhering to its walls are all dead. Indeed the normal

vaginal secretion seems to be a perfect poison for the superabundant spermatozoa.

When, after a month's treatment, I wish to know whether the case is cured or not—in other words, whether all possible barriers to conception are removed—I order sexual intercourse (just after menstruation) at night, and examine the cervical mucus twelve or fourteen hours afterwards. If the majority of the spermatozoa be alive and active, I have great hope of conception. Before dismissing a case as cured, I think it necessary to examine the mucus thirty-six hours after coition; and, if it is then all right, of course I suspend the treatment, and patiently wait the hoped-for result.

So much care is necessary for the removal of the mucus for the microscopic examination, that I may be pardoned for referring to it again. The patient is placed in the left lateral semi-prone position, as I have elsewhere so minutely described, and my speculum is introduced, and some of the vaginal mucus drawn up with a small glass syringe, previously washed out with warm water. This is deposited on the object.glass; the vagina is then cleared of all secretion, whether vaginal or cervical, the whole of the vagina and the os uteri being thoronghly wiped over with a pledget of cotton. This is for the purpose of guarding against the possibility of mixing vaginal with cervical mucus, which would, of course, spoil the whole experiment. The cervix is then brought forward either by the depressor or a tenaculum, if necessary, which enables us to look directly into the cavity of the cervical canal. The syringe is then again to be thoroughly rinsed in warm water; its nozzle is passed into the gaping canal for half an inch, and the cervical mucus in its lower segment is drawn out. The instrument is emptied, washed out again with warm water and reintroduced up to the os internum, and another portion of mucus is drawn out, provided there is any left after the first effort. Thus we have three specimens of mucus; i. e., one vaginal and two cervical. The cervical secretion should be clear and translucent, and about the consistence of the white of an egg. If it contain any little opaque specks of milky whiteness, it invariably poisons the spermatozoa to a greater or less extent. We sometimes find the cervical mucus perfectly clear, and yet poisonous to the spermatozoa. Here we would naturally expect to find excessive alkalinity of

the secretion; but I have not been able to detect it. In these cases it has seemed to me that the spermatozoa were killed—drowned, as it were—by the abundance of the secretion. I do not here allude to cases of uterine catarrh, where the secretion is very thick and albumino-purulent; for, of course, this is a deadly poison to the living principle of the semen. But I allude wholly to such cases as have been changed by treatment to a condition giving rise to a secretion seemingly normal, so far as ordinary ocular examination is concerned. Here the microscope is our unerring guide. The mucus may be clear, and perfectly normal in appearance; but, if it kill the spermatozoa, then there is still some point in the canal of the cervix, or in the cavity of the uterus, that gives out a vitiated secretion; and this must be found out and corrected before the case is wholly cured. When we find living, active spermatozoa high up in the cervical canal thirty-six or forty hours after coition, we can pronounce the case cured, so far as it may be by surgical means, and not till then.

It is time for us to pause, and consider if there is not something more to be done for the sterile condition, than to split up the cervix uteri. I look upon this operation as one of great importance, as one of the most valuable in uterine surgery, but I think we have followed too blindly the example and teachings of its illustrious author, Sir James Y. Simpson. For msself, I am now sure that I have cut open the cervix uteri, perhaps scores of times, when it was both useless and unnecessary; and I know that others have done the same thing. Do not misunderstand me. I speak here solely of the operation with reference to the sterile condition, when it would be wholly useless if the husband happened to be sterile, and certainly unjustifiable unless imperatively called for by considerations of health. Incision of the cervix for dysmenorrhœa is one thing; incision of the cervix for sterility, even if there be dysmenorrhœa, is another, and it behooves us to draw the line of distinction in every case, and not to take it for granted that every woman is sterile who may have feeble health, and that every man is prolific who may be vigorous and enjoy good health. I am sorry to say that I have had the misfortune to incise the cervix in half a dozen cases of sterility, where I found afterward, to my great mortification, that the husbands are incapable of procreation, because their semen

had no spermatozoa, and that, too, since I have known the value of the microscope. In each case the operation was called for to restore health, but was totally useless for the relief of its incidental accompaniment, sterility, and would not probably have been submitted to for considerations of health alone, had it not been for the hope of offspring afterward. I made the mistake of operating on these cases, because the social position, moral character, and appearance of health in the husband, conjoined with the excessive dysmenorrhœa and utter prostration of the wife, led me to operate without the preliminary step of ascertaining whether there were spermatozoa or not. I wish others to profit by my mistakes; and I am less ashamed to tell you of them than I am to own them to myself. However, this can never happen to me again, and should not, after this warning, happen to any of my brethren. I know many men who have no spermatozoa, and cannot therefore become fathers. They are all strong, active men, in the prime of life, and all perform the sexual function with vigor. The very fact of their natural vigor and strong passions had been their ruin, for most of them had contracted urethritis during their early and unmarried life, and had suffered from its unlucky sequence, epididymitis.

Not very long ago (seven or eight years), I had the idea that sterility was essentially a female infirmity; that men were never sterile, except when impotent; and that any man, legally competent for the married state, was physically so for procreation. But the microscope unsettles and settles all such vague notions. It is natural to suppose that a strong, vigorous man is more fitted for procreation than a weak or puny-looking one. Some of the greatest lights of the profession have held such views as this. It was only two or three years before the death of the lamented Trosseau, that he said to me, in speaking of a case we had under consultation, "If our patient only had a man for a husband, all would be right." I subsequently found out that the husband's passions were strong; that his semen was perfect; that it entered the cervix in great abundance; and that the spermatozoa were there poisoned by a vitiated secretion. I mention this to show that we must not judge from appearances, when it is so easy to settle the question by the microscope.

Once I thought that the most common obstacle to conception was a contracted cervical canal, contracted at its outlet, at the os internum, or throughout its entire length. But, if I were now asked, "What is the most frequent obstacle to conception?" I should unhesitatingly say, "An abnormal utero-cervical secretion that poisons or kills the spermatozoa." I can call to mind numbers of cases where, in former years, I incised the cervix, when the operation was satisfactorily done, and yet the sterility persisted. In some of these I have now not the least doubt that the husbands were sterile, and in others I have as little doubt that the cervical mucus was poisonous to the spermatozoa. If I had then possessed the exact knowledge of to-day, how much more satisfactory would it have bave been for me—how much better for my poor patients!

Death from Chloroform.

Henry Gibbons, Jr., M.D., *Pacific Med. Journal*, reporting instances of fifty-seven deaths from chloroform, concludes as follows:

Since collecting and arranging the above cases, some others have come to my knowledge, which must, however, be deferred to another occasion. Here are 57 deaths, of which 32 occurred in the United States—5 of them in 1867, and 10 in 1868—19 in England, 2 in Paris, and one each in Dublin, Vienna, Prussia and Canada. They occurred in the following years: one each in 1850, 1856, 1858, 1859, 1860 and 1865; 3 each in 1862, 1864 and 1866; 13 in 1867; 24 in 1868; and in the remaining 4 the year is not stated. Omitting the two duplicated cases in Dr. Reeves' paper there are now 188 deaths from chloroform on record, of which 104 occurred in England and Scotland, 40 in the United States, 18 in France and the rest in various other countries. The mortality in each year is as follows: 1848, 8; 1849, 6; 1850, 8; 1851, 4; 1852, 7; 1853, 5; 1854, 10; 1855, 4; 1856, 4; 1857, 2; 1858, 7; 1859, 7; 1860, 7; 1861, 6; 1862, 15; 1863, 8; 1864, 11; 1865, 5; 1866, 6; 1867, 13; 1868, 24; and in 21 the year is not stated, but at least 15 of them are known to have taken place prior to

1862. The extraordinary mortality reported for 1868, which with one exception is confined to but two countries, the United States (10) and England (13), is worthy of the most thoughtful consideration. Great interest in this subject has, of late, been manifested. The medical journals seem to have been specially active in seeking out and publishing all cases of death from the agent under consideration, and to this fact is no doubt due, at least in great part, the large number above noted. The number of deaths in 1865 and 1866 is ridiculously small, if it is proper to apply such an adjective to so serious a matter.

Highly interesting and instructive facts may be learned by careful examination and consideration of the cases presented in this paper. They have reference to the time at which death took place; the mode of dying; the means used in the endeavor to prevent death; the amount of chloroform inhaled; the previous use of the anæsthetic, etc. They mainly corroborate the results of previous investigations, and will, therefore, be considered very briefly, as the space already occupied is far greater than was anticipated.

Death in a majority of the cases was sudden. In 28 it occurred almost immediately or within a very few minutes of the exhibition of the anæsthetic, and before or immediately after the commencement of the operation; in 4 it ensued just as the operation was completed; in 17 there is no definite statement upon this point, though in the majority of them the inference is that death was sudden; and in 8 the fatal result was more or less remote from the termination of the operation, or was not due entirely to chloroform.

Of these latter, one (XII) was that of a man who died seventeen hours after he had undergone an extensive operation—excision of the scapula—and death was probably by syncope; one, (XIV) a man who lying on his back, vomited, and the fluid not being thrown out of his mouth, some of it was supposed to have been drawn into the trachea, as violent struggling ensued; he became black in the face and died at once, evedently from asphyxia; in two cases (XXV, XXVI) the fatal result was in part, at least, attributable to the inhalation of impure chloroform, as the latter was found to contain hydrochloric acid, and the symptoms were those which might be caused by the action of irritant gases or vapors upon the air passages. Death

took place in twelve hours. In case XXXIX there was *stated* to be pulmonary phthisis; the patient "rallied for a time" and then expired; in case XL the patient after the operation spoke a few words, "gasped three times and was dead;" and in case XLI there was great loss of blood. Four of the deaths were in persons who took the chloroform while alone, and on their own responsibility, the length of time after the commencement of inhalation being, of course, unknown.

As regards the mode of dying, it was probably very generally by syncope, though of the 17 instances in which this fact can be ascertained, 9 were by syncope and 8 by asphyxia. The means to be used to prevent death when alarming symptoms have arisen, of course depend very much upon the mode of death. The same plan, however, seems to have been adopted in nearly all the cases, the records of which contain any mention of the subject. It consisted in drawing out the tongue; dashing cold water on the face; applying ammonia to the nostrils, though what benefit could arise from this, after cessation of breathing, is certainly not apparent; and artificial respiration, by Marshal Hall's method, by forcing air into the lungs either through the mouth or an opening in the trachea, or by other means. In a number of instances galvanism was resorted to, and in one or two the patient was bled. Over a year ago a physician in New York claimed to have saved the life of a patient who had apparently died while under the influence of chloroform, by placing his body at an angle of forty-five degrees. The description of this process was very obscure, but in all probabability it was the same as that recently proposed by Dr. E. L. Holmes, in an article in the *Chicago Medical Examiner*, *Sept.*, *1868*, entitled "Position in the Treatment of Chloroform Poisoning." In this article he advises when syncope has occurred, "to place the patient with the head downward on an inclined plane of at least 40°." The method of course would not be suitable in case of asphyxia, where there is evident congestion of the nervous centers, but only in those cases in which the brain is temporarily anemic, the gravitation of the blood overcoming this condition.

I recently administered chloroform (against my wish, but ether was absolutely refused) to a lady for a minor operation. She had been in the habit of using it for years to

allay neuralgia, and had taken it in large quantities. Pouring a few drops upon a handkerchief, I placed it near the nostrils and was obliged to repeat the process so frequently, before there was loss of sensation, that over two ounces of chloroform were used. Several times I almost resolved to discontinue the chloroform, but finally anæsthesia occurred and the operation was performed. On its completion, and after the inhalation had been discontinued, the patient became deathly pale and ceased to breathe. I immediately drew the head and shoulders from the pillow on the sofa upon which she was lying, and lowered them below the level of the body, when breathing was almost directly resumed, and the head was replaced on the pillow. But breathing in a few moments ceased again, and the same process being repeated it again returned, the head thereafter being kept low until the tendency to syncope had passed. This is a fair illustration of the advantage of position in the syncope of chloroform poisoning as suggested by Dr. Holmes.

In only seventeen cases is the amount of chloroform used designated. This was a drachm in three cases, from one to two drachms in eight cases, two and a half and four and a half drachms in two cases, eight drachms in three cases and ten drachms in one case. In another case it is simply stated that a large quantity was given. Eight of the patients, it is stated, had previously inhaled the anæsthetic, and in all but one of them it had acted kindly.

In conclusion it may be added, that in view of the facts noted in this communication, we cannot felicitate ourselves as Prof. Billroth recently did when he said in a clinical lecture, "Fortunately we may regard death from chloroform as a very rare occurrence, and one becoming more rare every year."

Contagion of Consumption.

M. Chauveau, Professor in the Lyons Veterinary School, continues perseveringly his researches on the contagiosity of tuberculosis. He has of late selected the intestinal surface as the field for his investigations, and through it, by introducing tuberculous matter into the circulatory current,

he has produced at will general tubercle. The *Union Médicale* reports that he lately purchased four handsome heifers, and he tuberculized three of them by causing them to swallow 30 grammes each of tuberculous matter taken from the body of an old phthisical cow. The rapidity of the result was extraordinary. At the end of twenty days the first heifer had lost flesh to a surprising extent, its pulse was quick and full, and it coughed incessantly. At the end of fifty-two days it was killed, and it presented perfectly marked tuberculous lesions, situated especially about the mesentery and intestine. The mesenteric glands presented infiltration in so high a degree, that many were of the size of the fist. Their total mass weighed 1,650 grammes. All the ganglia of the bronchi and mediastinum were enlarged, and the lung was full of crude tubercle. The other two heifers presented not less perfectly marked alterations, while the fourth, to whom none of the tuberculous matter had been administered, remained intact, and increased in flesh.

It is proved, therefore, that animals of the bovine species contract tuberculosis by digestive ingestion, just as they take carbuncle and cowpox, as sheep take the rot, as the horse takes glanders, and as man takes smallpox. The human digestive tube constitutes an easy channel for tuberculous contagion. If bovine phthisis be identical with tuberculosis in the human species, there is, in the use of the flesh of tuberculous animals, a danger to which the poor are more especially exposed.—*Medical Press and Circular, March 24.*

Carbolic Acid.

We think it necessary to put our readers on their guard against an incautious use of carbolic acid. It seems to be forgotten, sometimes, that this substance exercises a powerfully destructive action upon animal tissues, and that it is, in fact, a very strong caustic when concentrated. There is no doubt that many serious accidents have recently occurred from surgeons not being aware of the properties of the remedy they use so freely. It must also be remembered that the direct application of carbolic acid, even in a diluted form, to a granulating surface, will often delay cicatrization,

and tend to promote suppuration; whereas, if it is employed at a distance from the wound, it will tend to diminish the formation of pus. There is, moreover, a good deal of evidence to show that it tends to stimulate the circulation through the smaller vessels, and thus gives rise to hæmorrhagic oozing from recently cut surfaces, preventing their primary adhesion. If, however, it be properly applied, in a diluted form, to the wound itself, and in some permanent and non-volatile form to the external parts, it will be found to have a powerful influence in retarding and diminishing suppuration.—*Medical News.*

Two Interesting Parasitic Diseases.

J. H. Salisbury, M.D., Cleveland, Ohio, (*Boston Medical and Surgical Journal*), mentions two interesting parasitic diseases, with their treatment.

1st. *Chloasma produced by the Microsporon furfur* (Robin).—A cigar-maker, aged 30, came to him in January last, covered over the whole trunk, anteriorily and posteriorily, with brownish yellow maculæ, or spots of irregular outline, from the size of a pin-head to four and six lines in diameter. The spots were not elevated above what appeared to be the surrounding skin. The epidermis was soft and pultaceous, and appeared spongy when scraped with a scalpel. The colored cuticle peeled off like the epidermis from a boiled apple. The sheets and night-dresses were covered with furfuraceous scales. On microscopical examination, the epidermis was found filled with a fungus (*Microsporon furfur*), both in the spore and filamentous stages of development. The spores were developed in multitudes in the dark spots.

Treatment.—The patient was pale and emaciated, and was disturbed at night by alternate sweating and chilliness. A diet of rare beef and bread was ordered, and he was put on the following treatment:

℞. Acid, sulphuric aromat. ʒ iij.—S. Put two teaspoonfuls in half a pint of warm water, and wash the body and limbs all over every other night, and wipe dry afterwards.

℞. Nichols' sol. bisulphite of soda, ʒ iij.—S.

Put 1½ tablespoonfuls in half a pint of warm water, and wash the body and limbs all over every other night, and wipe dry. ℞ Tr. ferri chlorid. ʒ iij.—S. Take twenty drops in a full glass of water two hours after each meal. ℞ Tr. cinchonæ comp. ʒ vj.; potass. bromid. ʒ iv.—S. Take a teaspoonful before each meal.

On the fourth day of treatment the spots had entirely disappeared. Sickly spores and filaments remained in the epidermis, but further development seemed to be checked. Treatment was continued. At the end of two weeks, the vegetation disappeared, the skin was smooth and healthy, and the patient had gained several pounds in weight, and was feeling perfectly well.

2d. *Parasitic Disease of the Conjunctival Membrane and Epidermis of Cheek.*—A carpenter, aged 26, came to him with a diffuse inflammation, roughness and œdema of the eyelids and the surrounding soft parts. The inflammation and scaly condition extended over nearly the whole cheek, to the wing of the nose, and from this point, up the ridge of this organ, to the forehead, involving the entire eyebrow. At first it was considered a case of erysipelas, but on examination, the epidermis was filled with a fungoid growth, in the spore and filament stages of development. This vegetation extended to the conjunctival membrane lining the eyelids. The following was prescribed: ℞ Dilute citrine ointment, ʒ ij., glycerine, ʒiij.—M.S. Apply morning, noon and night, to the inside of eye and over the entire affected parts. ℞ Nichols' sol. bisulphite of soda, ʒ ss.; aquæ, ʒ viij.—M. With an atomizer, the spray of this mixture was thrown into the eye and over the cheek, for five minutes, morning and evening, after washing and before applying the ointment. ℞ Tr. ferri. chlorid. ʒiij.—S. Take twenty drops in a full tumbler of water two hours after breakfast and dinner. The use of sweets and all organic acids was forbidden, and a plain, substantial diet ordered. The patient rapidly recovered, and in three weeks there was not a trace of the parasitic growth.

Calabar Bean.

Dr. William Wright communicates to the Canada *Med. Journal* a valuable paper upon this agent, asserting it to be locally an antidote to belladonna, and generally to strychnia, and as a remedy in tetanus. Its efficacy in this latter

instance, however, is limited by the degree of lesion of the peripheral nerves, the agent having no control over the afferent or sensory nerves, and does not suspend their conductivity.

It would seem from the above that the calabar bean occupies a similar relation to tetanus as does chloroform, simply suspending the reflex irritability of the spinal cord, but as not moderating the irritation of the peripheral extremities of the nerves. As this is, in the vast majority of cases, the pathognomonic element in tetanus, we fear that the treatment of this formidable malady is "*adhuc subjudice.*"

OBITUARY.

DIED, in Philadelphia, on the 1st of April, after a protracted illness, ROBLEY DUNGLISON, M.D., Emeritus Professor of the Institutes of Medicine in Jefferson Medical College, and late Dean of that Faculty.

Few physicians in this country have established a wider reputation than Dr. Dunglison. His learning was extensive and varied; he was a ready writer and a voluminous contributor to medical literature. So popular, at one time, were his works, that they were adopted as text-books in nearly all our medical colleges. He was a highly courteous gentleman, and possessed uncommon tact and good sense, which contributed largely to the success of the institution, over the affairs of which he presided. He had many social qualities also which endeared him to a large circle of friends who will long deplore his loss.—*Med. News.*

DIED, in Albany, June 17th, Prof. ALDEN MARCH, aged about seventy-four.

The life of Dr. March is identified with the history of the profession, of which he was one of the brightest ornaments. He was alike distinguished as a scholar, teacher, and as a bold yet cautious and skillful surgeon. Beloved in private life, crowned with the highest honors of the profession, his decease will be widely and deeply lamented. To the Albany Medical College, of which he was the founder, his loss can with difficulty be replaced.

DIED.—In Miramac, Indiana, May 28, 1869, Dr. Asa M. Pearson, aged thirty-seven years.

Dr. Pearson was a member of the class in Rush Medical College in 1856-7.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—JULY 15, 1869.—No. 14.

TRANSLATIONS.

Anatomical and Physiological Observations made upon Decapitated Subjects.

BY M. CH. ROBIN.

From Robin's Journal of Anatomy and Physiology.

[Continued from Last Number.]

III.—State of the Arteries and Veins of the Trunk.

In the three decapitated subjects who were carefully studied with a view to determine the state of the vessels, we found the vertebral artery and vein in the trunk incompletely retracted upon themselves, containing air only, and showing the orifice occasioned by their transverse section, with margins a little depressed but open.

The two primitive carotids, incompletely retracted upon themselves, contained air, and air mingled with frothy blood was found throughout the whole extent of the sub clavian

of each side, as well as in the origins of some of the arteries which originate therefrom.

The arch and a portion of the thoracic aorta, whilst very distinctly retracted upon themselves, contained frothy blood in which the volume of air exceeded, considerably, that of the blood with which it was mingled.

I have met with no author who has indicated the presence of air in the arteries of the head, which was referred to in the last paragraph. But it is interesting to compare with the facts which we have just mentioned, the following, which have been observed, at Brest, by Professor Marcellin Duval and by his assistants.

In two criminals subjected to experiment five or six minutes after decapitation, the extremities of the primitive carotids rose by regular pulsations, extended themselves, and protruded beyond the level of the plane of section of the neck, to retract again upon themselves.

At each impulse a small quantity of frothy scarlet blood escaped from the distended opening of the carotids. Blood was poured out, likewise, by the internal jugular veins. It was *equally frothy* but of a deeper color (M. Duval, *Expe riénces sur des supplicées.* Congrés Médical International de Paris, 1868, 8vo, p. 624).

It is very certain from the preceding facts, that air penetrates into the carotid arteries, in consequence of the tendency to the formation of a vacuum induced by the gradual retraction of the lung, although it could only enter therein during the short duration of each period of the cardiac diastole.

In the case of the first criminal whose vessels we dissected with the view to determine the nature of their contents, the left primitive carotid had been torn rather than cut. Its divided extremity was a little conical, ragged on the side of the trunk. There was a clot between the lips of the arterial section, and in the whole extent of the arm, the

vessel and its branches, slightly retracted upon themselves, were filled with blood, by the side of the corresponding veins which were nearly empty. On the contrary, in the other limbs, and in the trunk, the arteries completely contracted upon themselves were bloodless.

In the walls of the trunk and in the limbs, the tissues are generally bloodless; but there remains, however, a little blood in the satellite veins of the arteries which themselves contain none. There is always more or less of it from one vein to another. Thus the testicular, diaphragmatic, mammary, internal and pericardiac veins contain, ordinarily, more than the satellite veins of the arteries of the limbs and of the abdominal parietes.

As to the internal jugular veins, the axillary, sub-clavian, brachio-cephalic and superior cava, they are found completely full of air. Here the air has naturally replaced the blood which flowed out from the internal jugular, by reason of the state of dilatation in which they are maintained by their adhesions to the aponeuroses and other organs to which they are attached, as has been clearly indicated by P. Bérard (*Archives Général de Médicine*, Paris, 1830, t. XXIII, p. 170.)

The auricular appendages, the right auricle and the ventricle were full of air, in two subjects, and the pulmonary artery contained black blood with some large bubbles of air. In the third, the auricle, the auricular appendage, and the ventricle of the right side contained very frothy blood, in which the air represented a mass much more considerable than the liquid.

We shall recur, in the following paragraph, to this point, which is only referred to here in order to mention that in two instances out of three, there were bubbles of air separating the little columns of blood in the cardiac veins, up to the point where their calibre diminished to a millimetre or less.

In all the subjects, there was gas in the trunk of the vena-cava, and in one of them there were seen big bubbles mingled with blood up to the level of the venal veins, and in the trunk of the hepatic veins.

The vena porta contained blood in all the subjects observed, as well as in the principal trunk, but always sensibly less than in the bodies of individuals dead from disease. This last fact is easily understood, by reason of this, that the blood of the mesenteric arteries, in place of being driven into the capillaries, thence into the corresponding veins by the arterial retraction consecutive to death escapes, in these decapitated subjects, from the direction of the aorta, and in the cavity of this conduit which empties itself through the several carotids and vertebrals.

The indication of the presence of air in the veins of the neck and of the heart of decapitated subjects, obliges us to notice carefully the absence of gas in the portal vein. In some animals, indeed, such as the plagiostome fishes, there occurs, in the blood of the vena-cava and hepatic veins, a spontaneous disengagement of gas in sufficient quantity to distend the vessels. This separation commences immediately after the death, by asphyxia, of the animal removed from the water (Voyez Ch. Robin, art. Hygrologie, *Dictionnaire d'Histoire Naturelle d'Orbiquy*, Paris, 1868, 2d edit., 8vo, t. VII, p. 489, et Suiv., et *des Tissues et des Secretions*, Paris, 1869, 8vo., p. 100.

The blood of the splenic vein contained leucocytes in quantity nearly double of that which was seen in drops of the same volume of blood from the splenic artery and from the pelvic veins.

It was easy for us to determine that water and acetic acid acted upon these leucocytes of the splenic veins, as upon those of blood, of pus, of mucus, etc. The action of these liquids was, on the contrary, quite different; that is, it was almost null upon the spherical nucleated epithelia obtained

by compressing a little of the parenchyma of the spleen, so as to press and force out, in some measure the splenic pulp mingled with the blood in the large vessels of the organ.

The hepatic veins contained more blood, especially when compared with the hepatic branches of the portal vein.

IV—State of the Heart and Pulmonary Vessels.

In two decapitated subjects observed in my laboratory, the right auricular appendage and auricle were entirely filled with air. They were depressed since they had been cut, and their internal surfaces slightly moistened with blood. In these subjects there were bubbles of air separating little columns of blood, in the cardiac veins, as has been previously observed.

The right ventricle, laid open, collapsed, contained only a little frothy blood, formed of nearly equal volumes of air and liquid.

The pulmonary artery and its branches, perceptibly retracted upon themselves, contained black blood, without air bubbles, in one of these subjects.

In the two otner subjects, the pulmonary artery was found in the same condition; but the blood, although dark colored, was mingled with a number of air bubbles, whose presence it was easy to recognize, particularly in the arterial trunk.

In one of the three subjects, the auricular appendage as well as the auricle and ventricle of the right side, very sensibly collapsed, contained only frothy blood, formed of almost equal volumes of gas and blood. This subject was one of those in whom bubbles of air were mingled with blood in the trunk of the pulmonary artery; the cardiac veins enclosed none of it.

After what has been said above of the conditions which favor the penetration of air into the superior cava, it must be understood that the respiratory movements cease after

the section of the neck; the repletion of the right auricular appendage with air is inevitably favored by the gradual retraction of the lung, a retraction completed simultaneously by the entrance of the air into the veins and into the right heart above, by the ascent of the diaphragm and of the sub-diaphragmatic organs below. In every case, the left auricular appendage was entirely empty, although there was a little non-coagulated blood in the pulmonary veins.

The left ventricle formed a firm mass larger than that of the right, whose walls remained soft and compressible. In all, the left ventricle, strongly retracted upon itself, was empty, with the exception of a small quantity of blood, which was found, as it were, closed up in the cul-de-sac formed by the inter-ventricular space and the corresponding segment of the mitral valve. In one of them this blood, already coagulated, formed a small mass, having about the superficial area of a silver five-franc piece. Its thickness was a little less than that of these pieces, especially towards the bottom of the cul-de-sac; it gradually became thinner as it neared the free edge of the valve, at which level it terminated.

The presence of this small quantity of blood in the left ventricle of the three decapitated subjects, proves clearly that the ventricles do empty themselves in a manner absolutely complete after each systole. *

In the youngest of the subjects observed there was, moreover, on the left, between the three large columnæ carnæ of *the mitral valve* an irregular clot of the size of an almond. It was soft, black, without trace of fibrine which had been deprived of red globules. It appeared to have been the product of the last outpouring from the left auricular ap-

* No author whom I have consulted has spoken of the contents of the cavities of the heart in decapitated subjects, nor yet of the influence of their repletion upon the contraction of the parieties of this organ, a fact which will be considered in the next paragraph.

pendage into the already immovable ventricle, the appendage having itself received blood which had just traversed the lungs, after the cessation of all inspiratory movement. Hifflesheim, by showing that in the circulation *the sanguineous circle is not interrupted at any point** has placed, in clear relief the importance of the question whether in each ventricular systole the cavities of the ventricles empty themselves completely, a question already resolved negatively by Senac, Bartholin, I. Müller, etc., whom many phosiologists regard but little, and of whom Bérard has given a historical sketch (*Cours de Physiologie*, Paris, 1851, t. III, p. 643).

This importance has become greater still by the experimental demonstration of this fact, that the capacity of each ventricle exceeds, by a fifth or a fourth that of the corresponding auricular appendage (Hifflesheim et Ch. Robin, année 1864, de ce Recuil, p. 416). M. Chauveau has shown us also that at the end of each ventricular systole, there is under the valvular arch of the left and right heart of the horse a conical cavity which still contains a determinate quantity of blood. (Gazette Médicale, 1856, et Béraud, *Elements de Physiologie*, Paris, 1857, 2d edit., t. II, p. 287.

V.—Experiments upon the Contractions of the Heart.

The heart of the first of the decapitated subjects, referred to in this sketch, was observed nearly seven hours after death. That of the second only ten hours after his execution. No experiment was attempted upon either of them. The most careful observation failed to detect any spontaneous movement of these organs, not more than from the contact of the fingers or the point of the scalpel.

Before reporting the observations which I made upon the

* Hifflesheim, *Journal de Chimie et de Physique* de Laurent Gerhardt et Nickles, in 8vo, 1849, *Comptes rendus et mene de la Societe de Physiologie*, Paris, 1854, in 8vo, p. 273, *Journal de l'Anatomie et de la Physiologie*, Paris, 1864, in 8vo, t, 1, p. 437.

movements of the heart of the third subject, I will state that M. Marcellin Duval has established the facts,as follows: "The chest was rapidly opened about seven minutes after the death of one of the criminals. Previous to the incision of the pericardium, the pulsations of the heart could be distinguished through the two layers of this membrane. At the moment of incision about forty grammes of limpid and slightly yellowish serum escaped.

"The heart exposed without any change in its relations presented the following phenomena:

"After a brief but perceptible period of immobility, the auricle was elevated abruptly, and separated from the aorta, which is exposed, then rapidly recedes and resumes its original position. The auricular appendage was exposed (as though distended with fluid). During its erection the auricle was elongated, and the fringes and indentations of its margin expanded, like the fingers of the hand, to be again approximated when the organ collapsed.

"The double movement, perfectly rythmical, was reproduced forty-eight times during the first minute; but it was soon retarded, and in the course of the fifth minute it occurred but seven times. In the case of the first subject (1850), the right auricle presented, during an hour and a quarter, energetic and regular movements or pulsations, which, at first, recurred forty-three or forty-four times per minute, and continued in spite of the removal of the stomach, the liver, the intestines, the diaphragm, and even the lungs." (M. Duval, *loc. cit.*, 1867, p. 524, et journal *la France Médicale*, Août, 1867.)

The heart of the third subject upon which I experimented, was exposed at seven o'clock in the morning, the execution having taken place at forty or forty-five minutes past four o'clock.

Experiments were made upon this subject in the presence and with the assistance of M. Dupré, Surgeon to

l'Hôpital de Bourg (Ain), and of two internes of that hospital, who by their skill as anatomists, rendered me great assistance, for which I can scarcely be sufficiently grateful.

I have already stated that the left ventricle of the heart of this subject was retracted and hard; that the left auricle and appendage, entirely empty, were retracted; that the right ventricle, although containing a little frothy blood, formed a mass smaller in volume than the left ventricle. The right auricle and appendage, partly collapsed, contained, likewise, frothy blood.

These organs were altogether motionless, without contraction, even when pricked, or when the surface was lightly scratched with the finger, even whilst they were yet warm.

I had already learned, by other physiological experiments, that the principle of the normal conditions which determine the contraction of hollow organs with muscular walls, consists, to a certain degree, of a maximum repletion of their cavities without excessive distension of their walls, whatever may be the nature of the body which fills them, provided that it does not attack them chemically or mechanically.

After examining the condition of the heart left in position for some minutes, I inflated it with air, by means of a tube introduced into one of the brachio-cephalic venous trunks, whilst the vena-cava inferior was obliterated, by compression below the diaphragm.

As soon as the right auricle and its appendage had become prominent, in consequence of their complete repletion, with a little less perfect repletion of the right ventricle, these organs entered spontaneously into perfect ryth mical contractions, to the number of sixty to sixty-four per minute.

These contractions commenced at the apex of the auricle, at which point they were vermiform, and of which they determined the erection in a very marked manner.

The contraction of this organ was both peristaltic and veriform, since it was propagated to the base of the auricle. All the corresponding portion of the auricular appendage, even, and at the same time its opposite extremity (which is a little above the level of the coronary vein), whilst its portion situated at the level of the mouths of the venæ-cavæ, was seized with a contraction which was propagated rapidly over the whole organ, until they met the others, near the attachment of the auricular appendage to the ventricle. Immediately upon the cessation of this contraction, toward the base of the ventricle, the right ventricle was seen to contract from the apex towards the base.

These ventricular contractions were very weak; did not determine a sensible diminution of the volume of the organ, except when at their beginning the surface was scraped lightly with the back of a scalpel, and after a few systolic contractions, remained confined to a portion only of the right ventricular walls near its extremity.

Those of the auricular appendage, on the contrary, were energetic, as if accompanied by an effort to expel its contents, which did not occur under the experimental conditions assumed; for these compelled us to maintain the obliterations of the vessels emptying into the right side of the heart, so that the auricular appendage only collapsed during each systole proportionally to the compression which it experienced from the air. Hence, the elasticity of the air was the cause of the auricular diastole.

In spite of the precautions, at the end of eight minutes the auricular appendage and the ventricle were perceptibly emptied. The contractions of the appendage became convulsed, that is to say, interrupted, tremulous, very frequent, although continuing to accomplish themselves from the auricle towards the base of the ventricle, according to the order indicated above. The insufflation of an additional quantity of air having reduced the appendage to its origi-

nal state of repletion, the contractions resumed their regularity. At the end of three or four minutes the right heart having been emptied of a portion of its gaseous contents, the contractions assumed, immediately, the interrupted character which has already been described, and which simulated to the eye, those which may be supposed to exist in certain palpitations of the heart, from the sensations experienced.

The regularity of the auricular systole was immediately restored by a new repletion of the heart.

This experiment having been repeated several times, we permited all the air to escape from the right ventricle and auricular appendage. Immediately all contraction ceased, even after touching with the point of the scalpel. The rythmic pulsations recommenced with all their regularity as soon as the right heart was refilled anew. This experiment was repeated several times with the same result.

These observations were prolonged for thirty minutes. We then directed our attention to the left heart. The auricular appendage distended with air did not contract spontaneously: it only did so under the influence of tickling with a soft point, and even then it only manifested fibrillary (fibrillaires) contractions, not extending over the entire surface.

The wall of the left ventricle, very hard, contracted upon itself, not at all distended by the insufflation, gave no sign of contractility.

Having, a little later, filled afresh the right heart (two hours and a half after the execution), we obtained no spontaneous contraction of the ventricle, nor of the auricular appendage. The latter always contracted but feebly, and not in its whole extent, when the surface was lightly scraped.

Several times, in the course of various experiments upon dogs dead of hæmorrhage, and recently upon a rabbit

killed with this intention, by section of the neck, I have seen the contractions of the left heart, and also those of the right heart recommence spontaneously after their repletion with air, even after they had ceased for some minutes. But in consequence of conditions which I shall presently narrate, I have never seen these contractions preserve their rythmical character so long as in the criminal of whom I have just spoken. Always, after a few regular contractions, and especially from the resumption of the systole, they were tremulous and interrupted or only extended over a portion of the appendage and the ventricle.

It is difficult to know, in the presence of the preceding facts, and in the absence of all information about the contents of the heart, what could be the value of the observation of Emmanuel Rousseau, related by M. Richelot, from the recollections of Rousseau (Œuvres de Hunter), French translation, Paris, 1843, 8vo, t. III, p. 148, in note), according to which observation he has seen the heart of a woman pulsate *twenty-four hours* after execution. It was principally one of the auricular appendages which acted.

The other cavities of the heart expanded and contracted upon themselves alternately, but their movement was more obscure than that of the appendage. "These pulsations," says the author, "persisted for more than three hours.

During these experiments, referred to above, it was very clearly seen, after the repletion of the appendages and of the auricles by the air, how their muscular wall is embraced between two serous membranes, likewise thin, but tenacious: how, in places, the muscular fasciculi separated leave free spaces in which the two serous membranes, the endocardium and the pericardium are applied and agglutinated to each other. In consequence of this disposition the contents of the auricular appendage are only separated from the pericardiac cavity by the thickness of the transparent sheet resulting from the fusion of the two cardiac serous

membranes, which, moreover, as I have shown elsewhere, are, by reason of their texture, the organs to which the heart owes, principally, its resistance to rupture by distension.

(TO BE CONTINUED IN NEXT NUMBER.)

COMMUNICATIONS.

Super-Oxygenation in the Dynamics of Organic Life.

BY Z. C. M'ELROY, M.D., ZANESVILLE, OHIO,

President Muskingum County Medical Society.

The reply of your correspondent, S. S. Wallihan, M.D., Chicago, to "Criticism and Strictures on Super-oxygenation," must be taken as evidence that human nature has not materially changed in eighteen hundred years. Iconoclasts and Fetich existed then, as they exist now. The *animus* of both appears to be substantialiy unchanged, as shown by the following bit of history: "And the same time there arose no small stir about that way; for a certain man named Demetrius, a silversmith who made silver shrines for Diana, brought no small gain to the craftsmen, whom he called together with the workmen of like occupation, and said, Sirs, ye know by this craft we have our wealth; moreover, ye see and hear, that not alone at Ephesus, but throughout all Asia, this Paul hath persuaded and turned away much people, saying that they be no gods, which are made with hands, so that not only this our craft is in danger to be set at nought, but, also, that the temple of the great goddess Diana should be despised, and her magnificence should be destroyed, whom all Asia and the world

worshipeth. And when they heard these sayings, they were full of wrath, and cried out, saying, Great is Diana of the Ephesians." (1)

Dr. Wallihan, like the Ephesian craftsmen, seems to have been filled "full of wrath by my accidental strictures and criticism" of his published cases, healed by super-oxygenation, and consequently, both dignity and courtesy are absent from his reply, which may be summed up in these words, "Great is super-oxygenation in the treatment of disease, especially when inhaled through one of 'my machines.'" (2)

From the whole temper and nature of his reply, Dr. W. evidently sees in Dr. Zeigler what he esteems to be a "fellow craftsman," for whom he only has sweetness and light; but, in myself he beholds an iconoclast, upon whom he proceeds to pour out his wrath in vulgar personal abuse.

Experience, clinically, is the court of last resort in all matters therapeutical, and the decisions there rendered are final and conclusive. Super-oxygenation, through Dr. Wallihan's "machine," has yet to pass this ordeal, and what the result may be it is not difficult to predict. Apparently, it would be in favor of the utility of direct super-oxygenation only in certain cases, though not to the exclusion of super-oxgenation by means of chlorate, or permanganate potassa, aqua regia, and other substances containing large volumes of oxygen in unstable chemical combinations, nor to the abandonment of the increased frequency and volume of oxygen introdued into the system during physical exertion in the open air of the country, and divers other therapeutical measures, all having for their end an increase in the velocity of the organic processes of nutrition and oxida-

(1) Acts xix : 24–28.

(2) See adv. Drs. Wallihan & Wilford, Chicago Medical Journal, June 15, 1869.

tion, a disarrangement of which occasions all states of the system included under the generic idea of disease.

No doubt exists in my mind as to the gradual, not to say more rapid, growth in the professional mind of simpler and truer views of life, as well as of disease and its therapeutical management, than is taught in our schools, or contained in text-books, for they can hardly be expected to represent more than the average status of the professional mind of the age. Text-books, as a rule, follow, but do not lead in medical progress. This crops out in monography, journals, etc., etc., before being adopted in text-books, or taught in the schools.

This is evidenced in many ways. Thus, the fact that the only impenetrable mystery of life is its *forms*, is the lesson of Prof. Huxley's recent lecture on *the physical basis of life*. Another is the more general recognition of the fact that the human body is composed of ordinary elements, widely distributed through nature; and its organization controlled, except in its forms, by the ordinary forces of inorganic nature. As over forms, therapeutic agents exercise no control whatever, they must be left out of therapeutical discussions. And as forms are the only feature of the human body unaccounted for by the operations of ordinary modes of the physical forces, it is to these that the term vital is alone applicable, and as over these therapeutics, have no control. The *vital force*, or preserver of forms amidst the incessant molecular changes of organized life, can no longer embarrass therapeutical discussions. The idea of a something in life, represented by the word *vital*, beyond comprehension, will no longer repel investigation, or serve as a cover for ignorance. The human body, physiologically, is very aptly illustrated by a burning candle, which gives light and heat at the expense of its substance, by combustion, *i. e.*, the carbon and hydrogen of the candle, combining with oxygen of the surrounding atmosphere; the result is

light, heat, carbonic acid and water. So, in organic dynamics, force, in any of its forms, can only be manifested at the expense of the tissues of the body. The food (protoplasm) is mainly, if not wholly, converted into organized tissues or textures, before oxidation and the production of force, *i. e.*, heat, mechanical motion, sensation, emotion, intellection and psychological phenomena.

And once again, the meaning of the *restorative system of medicine*, is, that man is superior to his maladies; and that disease is something less, not something added to life. Finally, the recognition of the unity of the body in its healthy, as well as disarranged conditions in disease, is an indispensable requisite to the free development of physiology, pathology and therapeutics.

These are pretty certain to form part of the creed of the coming physician, quite as certain as that coming events cast their shadows before them.

In conclusion, what oxygen—free oxygen—does in the laboratory of organic life, cannot be mistaken. The eighteen inspirations per minute in health, and greater frequency in disease, which are necessary to the continuation of life; the disturbances which instantly occur from an interruption of the almost continuous introduction into the system of free oxygen at the lungs, or change in its proportion to the atmosphere, or the introduction into it of other gases than those nominally contained in it, and the narrow range of temperature of the body in health, and its constantly accompanying changes in diseased conditions, are conclusive as to what oxygen does in organic life. Introduced into the system, if it does not combine with anything, it is a negation; if it combine with anything force will be liberated, and beyond the normal requirements of the system for force, it will appear as free heat. Free oxygen, introduced at the lungs, has, so far as science has determined, but one mission, and that is reduction, not

building up, only as a secondary result of the liberation of force.

Rush Medical College.

June 30, 1869.

Editor Chicago Medical Journal:

The Spring course for 1869 terminated Wednesday, June 30th. The instructors refer with pride to the character of the class. Twenty young men were enrolled at the beginning of the term, the largest number the spring course has ever attained.

The plan of instruction has given satisfaction. The Clinical advantages of the College Dispensary have been utilized. Over one thousand different cases have presented themselves there for diagnosis and treatment during the year just ended. Aside from this daily practice which the students have seen, the eye and ear infirmary and the County Hospital have presented cases of as great diversity and interest as ever, while the limited number attending the Cliniques favored access to the bedside. A system of training has been introduced, in the course of which each student has had assigned to him a certain number of cases whose history, diagnosis and treatment he was permitted to prepare and conduct under the supervision of the regular attendant.

The term closed in a quiet manner. Most of the students have left the city preparatory to their return at the opening of the regular college session, the 29th of September. We congratulate them. These practical methods of study under the shield of their *Alma Mater*, continued into the long vacation, will tell at the annual examinations.

Com.

East Fairfield, Ohio, *July 2, 1869.*

Prof. Allen:

Dear Sir—The following I send you for your opinion, and if you think it worthy publish it in your Journal:

Was called to attend a case on Friday, June 25, 1869. The patient, a male about forty-five years of age, was injured in a fight by being struck on the head in the cervical and lumbar regions. Upon examination I found that the injury from which he was suffering was over the fifth and sixth cervical vertebræ. They were thrown forward, the head being thrown backwards. Upon trying to bring the head forward to its natural position respiration would cease. The whole body was paralyzed; respiration very difficult and diaphragmatic. The patient being of full, robust habit, and pulse full and strong, I resorted to the use of the lancet and succeeded in getting about one pint of blood, after which the respiration became a little easier, but in other respects sinking. Called Dr. C. P. Chanlon in consultation; gave as our diagnosis partial displacement of the fifth and sixth cervical vertebræ. About five hours after receiving the injury he commenced coughing, when something snapped, which caused the patient to exclaim "My God, I have broken my neck!" and immediately he began moving his extremities and talking—his head at the same time coming back to its natural position. Improvement rapid. In three days was out of bed, walking about.

Was our diagnosis right or wrong? Please communicate to me your opinion and that of others in regard to this case, as some surgeons deny a recovery after a partial displacement. Yours, respectfully,

J. M. Meloney.

Medical College Fees.

LIBRARY MEDICAL DEPARTMENT UNIVERSITY OF LOUISVILLE,
May 27, 1869.

At a meeting of Delegates from Medical Colleges for the purpose of considering the question of fees, which was held this day, the following colleges were represented by delegates or letter, viz.:

University of Nashville; Shelby Medical College, Nashville; Memphis Medical College; St.Louis Medical College; Humboldt Medical College of St. Louis; Rush Medical College of Chicago; Chicago Medical College; Indiana Medical College of Indianapolis; Miami Medical College of Cincinnati; University of Louisville.

On motion, Dr. Bowling was elected Chairman, and Dr. Bayless Secretary of the meeting. After a prolonged conference, the following preamble and resolutions were adopted:

WHEREAS, The call for a convention of Delegates from the Medical Colleges of the West, for the purpose of arranging a uniform scale of fees, sent by the Faculty of the Medical Department of the University of Louisville to the Colleges of Nashville, Memphis, Cincinnati, Columbus, Cleveland, Detroit, Chicago, St. Louis, Indianrpolis and Louisville, has met with a cordial response in person or by letter from a majority of said Colleges, and

WHEREAS, The fact that several of said Colleges have issued their announcements for the ensuing sessions makes definite action at present impossible, and

WHEREAS, The views and opinions of the various schools as given by delegates and letters differ greatly; therefore be it

Resolved, That it is the hope of this Convention that a universal scale of charges shall be adopted by all the Medical Colleges of our country, and we do most earnestly advise such a scale shall be agreed upon; and it is our belief that the glory and usefulness of our profession would be enhanced by the highest rate advised by the American Medical Association.

Resolved, It is not less to be hoped that all the Medical Colleges of our country would fix a higher standard of preliminary and medical education as a pre-requisite for graduation.

Resolved, That the Convention request all the Medical Colleges in the United States to send each one delegate to a meeeing to be held in Washington, on Monday, May 2, 1870, to take efficient steps toward carrying out in good faith the recommendations of the American Medical Association in reference to medical education, and also to form a permanent association of American medical teachers.

Resolved, That a copy of these proceedings be sent to all the medical journals in the country.

WM. K. BOWLING, *President.*

GEO. BAYLESS, *Secretary.*

SOCIETY REPORTS.

Chicago Medical Society.

Friday Evening, *June* 11, 1869.

Regular meeting Chicago Medical Society, President Bogue in the chair. Minutes of last meeting were read and approved. Proposals for membership being in order, Dr. F. Bartels was recommended by Drs. Smith and Paoli, which was referred to the Board of Censors. Reports of Cases and Pathological Specimens being in order, Dr. Gray presented a specimen of a section of small intestine, and part of the colon, with its contiguous peritoneum. The Doctor stated the premonitory symptoms were dysentery, vomiting and hiccough; that the latter much aggravated the difficulty. There was intense abdominal pain, with but little tenderness or tympanitis of the bowels. Treatment, morphia and potassa nitras were given internally, and hot fomentation of hops were applied over the abdomen. Inhalation of chloroform gave but transient relief. No food or medicine could be retained upon the stomach, neither did any cathartic act from the beginning. The patient, aged 23 years, had suffered, prior to the attack, with obstinate constipation. The probable exciting cause of his early death was from taking violent exercise at a gymnasium, and bathing, after, in cold walter. He lived from Friday until the following Monday. Autopsy revealed each convolution of the intestines bound, as it were, by lymph. There was three quarts of serous fluid in the peritoneal cavity, but there was no perforation nor fæcal matter in them. Dr. Bogue stated he had seen cases similar, following traumatic injuries, by blows upon the abdomen, rupturing the intestines and the escape of fæcal matter. The symptoms were active peritonitis, and death usually followed within 48 hours. Dr. Gray asked if cold topical applications to the abdomen might be more grateful than warm. Dr. Davis answered that while continuous cold diminishes the amount of blood in the capillaries of the part, and was not always so acceptable, that continuous warmth diminishes the susceptibility and irritability of the part, and he usually made them more soothing by the addition of anodynes; that either application should be uniform in temperature. Dr. Davis reported also a case of death from epilepsy in a lady. She had had paroxysms, two or three per week, lasting a long time. They began after her last confinement. Her memory became much impaired, and there was a peculiar rolling of the eyes; that under the use of belladonna and bromide of ammonium the paroxysms so lengthened that she had but slight symptoms two or three times per week, with divergence of the eyes; that yesterday, while riding out,

she became frightened, and this morning her epileptic symptoms returned; that anticipating relief from a bath she repaired to the bath room and locked the door. The servant soon called her but received no answer. She was found dead in the bath tub. The Doctor thinks that after entering the bath she drowned in a paroxysm. Dr. Loverin reported a case of paraplegia in a young man. His eyes were divergent. The commencing cause was syphilis followed by affection of the spinal cord and ramifications of the brain; that he considered the patient liable to die at any time. Dr. Parker reported a case of acute rheumatism: that three days after the attack there were cardiac symptoms; that paroxysms of hiccoughing much aggravated the difficulty. Treatment: he gave morphia and bismuth, chloroform and ether; but more decided relief and cure was found in bromide of ammonium. Dr. Davis believed the locality of the brain affected in the cases reported was the optic thalami; that he had seen the eyes divergent in those cases but the intellect clear; that the disease might finally reach the medulla, affecting respiration, and apoplectic congestion, suffusion and death may supervene. Society adjourned.

HIRAM WANZER, *Secretary.*

Carroll County Medical Society.

The Society met pursuant to call of the Secretary at the Supervisor's rooms, in Mt. Carroll, at 11 o'clock, A. M., June 9, 1869. After making some arrangements for the good of the society, and exchanging views on medical topics, the Society adjourned until 2 o'clock, P. M.

Afternoon Session—Meeting called to order by the President; minutes of previous meeting read and approved. Dr. Thos. Winston, of Mt. Carroll, Illinois, and Dr. Nelson Rhinedollar, of Mt. Carroll, were then elected and admitted to full membership in the society.

On motion, it was ordered that the chair appoint a committee of three to draft a fee bill, and report at the next regular meeting. The following named members were appointed to read papers at our next meeting:

On Gun Shot Wounds—Dr. T. Winston, Foreston; on Contagious Diseases—Dr. D. M. Greely, Mt. Carroll; on Materia Medica—Dr. N. Rhinedollar, Mt. Carroll; on Medical Botany—Dr. Shimer, Mt. Carroll; on Diseases of the Liver—Dr. J Haller, Lanark; on Diseases of the Heart—Dr. J. B. Porter, Lanark. Some, who were present at this meeting, were not prepared. We shall be pleased to hear from them at our next.

On motion, it was ordered that any member or others, having papers prepared, and who cannot attend in person to read them, will please send them to the Secretary a few days before the time of meeting. Dr. Shimer then announced that Prof. Robley Dunlingson, M.D., of Jefferson Medical College, Philadelphia, died April 1, 1869. On motion of Dr. J. B. Porter, Dr.

Shimer was appointed to present a biographical sketch and eulogy on the name of our highly esteemed and deeply lamented brother and instructor, to be read at our next meeting. Dr. Greeley, of Mt. Carroll, read an essay on "Veratrum Viride," which, although brief, was well written. The Doctor set forth some very able arguments in regard to this agent. There was quite an interesting discussion of this subject by Drs. Skinner, J. B. Porter, Winston and Hostetter. Some of the members then gave reports of some cases in their practice, and asked for the views of others. This was very interesting, and if continued as a part of the exercises of our meetings, will, no doubt, be of very great benefit to the members and their patrons.

On motion of Dr. Greeley, it was decided to hold the next regular meeting of this society in Lanark, in the first part of September next; the day of meeting to be decided by the Secretary

On motion, it was ordered that the proceedings of this meeting be published in the county papers, and the MEDICAL JOURNAL of Chicago.

On motion, the society adjourned.

J. HALDER, M.D., *Secretary*,

JNO. L. HOSTETTER, M.D., *President*.

Minnesota State Medical Society.

Semi-Annual Meeting at Owatonna.

The State Medical Association convened at Owatonna, at 12 M., on the 16th inst., with Dr. J. H. Murphy temporarily in the Chair.

Minutes of last meeting read and approved. A committee of three on credentials was appointed, when the convention adjourned until 2 P. M.

AFTERNOON SESSION.

Re-assembled at the appointed time. Dr. Samuel Willey, President of the Society, arrived and took the chair.

Committee on Credentials reported the names of seventeen physicians as duly qualified for membership, which report was accepted.

Dr. H. H. Kimball, the essayist, appointed at the previous annual meeting, being absent, his valuable paper on Rheumatism was read by Dr. W. F. Hutchinson. An animated discussion followed its reading, participated in by a large number of the members of the Society, upon points presented by the essay.

EVENING SESSION.

"Quackery," the subject for discussion, was, on motion, changed to "Typhoid Fever." After the close of the debate, a resolution was introduced empowering the Chair to appoint a committee of three to report on typhoid fever, its origin, cause and treatment, at the next annual meeting. The fol-

lowing gentlemen were appointed as such committee: Drs. Willigan, Richardson and Mayo.

It was announced that the President, Dr. Willey, offers for competition to members of the Society, the following prizes: $50 for the best essay on Epidemic and Endemic Diseases of Minnesota, and $50 for the best essay on Cerebro-Spinal Meningitis. The respective merits of the essays to be determined by a committee appointed by the President.

A vote of thanks was unanimously adopted to the citizens of Owatonna, and especially Dr. Blood, for the generous hospitality extended by them to the members of the Society.

The Society then adjourned to the next general meeting at St. Paul, February 2d, 1870. E. J. DAVIS, Secretary.

Mankato, Minn., June 30, 1869.

Annual Meeting of the Fillmore County, Minn., Medical Society.

The Society met June 7th, at the office of Dr. Redman, in Preston, and was called to order by the President.

Dr. Redman moved to elect delegates to attend the State Medical Association, at Owatonna. Passed. Drs. R. W. Twitchell, A. H. Trow, L. Redman, L. Miller, and M. Donnelly were elected.

The following resolutions were then introduced and adopted:

Resolved, That the code of ethics adopted by the American Medical Association shall be our guide in our professional intercourse.

Resolved, That we will not fraternize with, nor meet in consultation, any one except a graduate of some regular medical college, who sustains a good moral character, provided this does not exclude a student reading with a member of this society, nor a physician who has been approbated by the Board of Censors of some medical society of the state of Minnesota.

Resolved, That each member of this Society shall inform the President thereof, in writing, at what college he graduated, giving the date of his diploma, on or before July 10th, 1869; and should any one neglect to comply with the provisions of this resolution, his name shall be stricken from the constitution; and, be it further

Resolved, That no person shall hereafter become a member of this Society until he has complied with the above requirement, or is admitted to membership by a vote of the Society.

Resolved, That Dr. Redman is hereby requested to prepare a list of the regular graduates of the county, also a list of the irregular practitioners and forward the same to Dr. Hand, of St. Paul.

Whereas, Medical societies are organized for diffusion of knowle ge and mutual benefit of the members; therefore,

Resolved, That each member will be expected to read an essay on some medical subject, or report the history of some case, as occurred in his practice, for discussion at each meeting of the Society.

The following officers were elected for the ensuing year. R. W. Twitchell, President; Dr. L. Redman, Vice President; Dr. A. H. Trow, Treasurer; Dr. M. Donnelly, Secretary; Drs. L. Redman, L. Miller, and — Plummer, Board of Censors.

Dr. Redman moved that the Secretary forward copies of proceedings to the Chicago Medical Journal and the County papers for publication. Carried.

Motion to adjourn, to meet on the second Monday of July, 1870, carried.

EDITORIAL.

Rush Medical College.

The Annual Catalogue and announcement of the course for 1869 and 1870 will be issued soon. Correspondents please notice.

Medical College Fees.

The JOURNAL has not space for its multitudinous communications on this subject, nor the editors time for private reply to the numerous circulars and letters calling their attention to the subject, and announcing the views of colleges, societies and individuals. We have abundant confidence in the business capacity of the Trustees of Rush Medical College, and we opine their doctrine is that "Entangling alliances should be avoided." The interests of the College and the profession are identical. The idea of the Faculty we know is to furnish the best possible instruction, both didactic and clinical, irrespective of fees, whether high or low. It is a notable fact that the chairs of Medical Colleges are filled (when *filled* at all) by men who do not seek or occupy them from pecuniary motives.

In cities of any considerable size, the contingent advantages of these positions often induce gentlemen to occupy them even at some direct pecuniary sacrifice. In small cities, where these contingent advantages are not presented,

the Faculties, unless salaried, are driven to seek direct emolument from advanced fees and diminished expenditure. Otherwise, as is too often the case, the chairs are sought and secured by little men whose ambition is to hold the title of Professor, as the only chance for notoriety. The next step with these men is to get into some general convention, and then clamor about "the elevation of the profession." They seek the power of what should be purely scientific associations to convert their impecunious titles into money-producing realities. Thus they attempt (and not infrequently succeed) to convert the scientific association into a trades-union, with pains and penalties.

"Let every tub stand on its own bottom." If every little city and hamlet which holds a half-dozen superfluous physicians chooses to incorporate them into a Medical Faculty, let it so be done, but let the incorporate then understand that they must depend upon themselves for subsequent success, and not upon loose and flatulent resolutions adopted by this or that organization serenely oblivious of the eleventh commandment: "Mind your own business." We wish somebody would explain to us why it is that after a longer or shorter interval, spent by a certain class of medical men in clamoring about the imperfections of medical teaching, and filling all ears with their jeremiads, objurgations and *twaddle*, the next thing we know of them they start a medical college where it is less called for than the proverbial "fifth wheel of a wagon," or "the little hole for the kitten, where there is already a big hole for the cat."

No wonder the professional trades-unions groan in spirit, and the apostolic "elevators" are disquieted thereby. It pleases us to see that the subject is temporarily postponed, by general consent. May it sleep well!

A Gratifying Appointment.

Readers of the JOURNAL will recollect that a year or two since we spoke highly of the efforts of Rev. E. O. Haven,

D.D., LL.D., President of the University of Michigan, for his powerful and unanswerable argument against the introduction of a homœopathic chair into the medical department of that Institution. The Profession of the Northwest owe him a debt of gratitude for warding off, for the time being at least, so foul a disgrace from a medical college. We are gratified, exceedingly, in noticing that he has been elected President of the Northwestern University, at Evanston, our beautiful neighboring suburban town. He has resigned his position at Ann Arbor, and will soon enter upon the discharge of the duties of his new position. Although not nominally, yet in fact, Evanston constitutes a part of Chicago, and we may, therefore, claim him as one of our own citizens. He brings to his new place large practical experience as a teacher, great executive abilities, a mind profound and logical, yet brilliant and versatile. An accomplished scholar, writer and orator, he combines elegant culture and social refinement with an unassuming amiability of disposition, and genial manners, which can not fail to make him universally popular, as well as successful.

We congratulate the University on securing his services, and cordially welcome him to his enlarged and most important sphere of usefulness.

Locations.

In common, we suppose, with our editorial *confreres*, we are in the receipt of numerous letters requesting our advice as to "openings for practice," either in this city or in some growing and enterprising western town. In most instances a partnership is desired with some "well-established practitioner."

Briefly—we know of no such chances. The only way to get at an "opening" is to make it. Find a place that suits, and, if merited, success will, sooner or later, follow. "Cold comfort"—but the best in our possession.

NEWS ITEMS.

R. M. Lackey, M.D., formerly of this city, is now editing *The Medical Adviser*, a double column magazine of four pages, 5 in. by 9 in. (including margin) each. The initial number only has reached us. It appears to be published gratuitously. Those wishing copies can address the Editor, P. O. box 35, Lyons, Iowa. Without explanations in subsequent numbers, we should conclude that a quite intelligent gentleman had subsided into the depths of the most pitiable quackery.

Washington City and Louisville are each to have a new Medical Journal, and the latter city is to rejoice in the luxury of a third Medical College, which we suppose will attempt to develop into the Grand National College suggested at the late meeting of the American Medical Asscia-tion. At least a score of schools located in country towns and ambitious little cities are putting in their claims for this distinction, and our Louisville friends must "look alive" if they would secure the honor. The new college has our vote in advance. Small towns are better for philosophical retirement and scholastic pursuits, not to speak of the removal of students from those unspeakable temptations that beset students in great cities like Chicago, New York, or Philadelphia.

The St. Louis Medical College has not been burned up, or down, as the newspaper press has it.

In those states where legislation for the protection of the profession has recently been indulged, we notice abundant crops of Eclectic, Homeopathic and Female Colleges are being cultivated. The "outsiders" are also forming societies which, under these statutes, have the power of grant-

ing certificates which entitle the holders to practice medicine and surgery. We hope some professional wiseacre will find a practical remedy for these little *practical* difficulties in medical legislation.

It is said that bodies injected with a mixture of three parts of glycerine and one of carbolic acid will be preserved several months without giving off any offensive odor.

The first number of the *Journal of the Gynæcological Society of Boston* has come to hand, and well sustains the promise of its prospectus. Published by James Campbell, 18 Tremont street, Boston. $8.00 a year in advance.

The venerable and celebrated Charles D. Meigs, M.D., for many years professor of obstetrics in Jefferson Medical College, and widely known for several standard works in his department, died suddenly at his country seat in Delaware county, Pa., June 22d.

An exchange mentions as a substitute for the stethoscope, in emergency, a glass lamp chimney. Wouldn't a good pair of ears answer better?

Dr. Peters prefers *Spirits Nitri Dulcis* to Belladonna as prophylactic of Scarlatina. He says belladonna is unreliable in small doses, and dangerous in large quantities. To which he might have added, that it probably has no relation whatever to the disease.

The *Philadelphia Reporter* says that saw-dust pills are excellent for many patients, provided they make their own saw-dust.

Asiatic cholera is said to have appeared among the troops in Cuba. Whether this is true or not, we fervently trust both public and private authorities may "put their houses in order," and not neglect their out-houses, barns, streets and alleys.

Dr. Frankland states (*Med. Gazette*) that soft water passing through animal charcoal drives from the latter sufficient phosphate of lime to destroy its property of acting upon lead.

That pretty physiological toy, the sphygmograph, has been modified by Dr. Hawksley, so as to indiate the dynamics both of the respiration and the circulation. He calls his instrument the *stetho-sphygmograph*. The *utero-sphygmograph* is next proposed, with a possible means of diagnosis not only of the activity but the sex of the embryo. Several crowned heads in the old world are anxiously awaiting the results of the experiments about to be instituted.

A writer in the *Sunday Times* of this city has revived the stale claim of Chas. T. Jackson, of Boston, as the originator of anæsthesia by ether for surgical purposes. The late very alphabetical Dr. Morton, notwithstanding his personal qualities however objectionable (*de mortuis nil, etc.*,) must, during all time to come, receive this great honor. Jackson had little if anything more to do with it than the hundreds of medical students and others who had inhaled the ether "for fun" years before its practical application by Morton. The present writer had a contemporaneous knowledge of all the facts in the case, and knows whereof he affirms. He had seen it given by inhalation as a "diffusible stimulant" during surgical operations times almost without number years before its full anæsthetic effect was illustrated even by Morton. Poor Wells even had more claims in this direction than the notable Jackson, who certainly needs some higher claims to distinction than he acquired by his geologic and metallurgic investigations in the Lake Superior regions.

Dr. Henry M. Field, in the *Gynæcological Journal* strongly commends the arseniate of iron in the constipation attending uterine disease. Oxalate of iron is also commended.

Dr. Gerould (*id.*) recomends *Bromide of Iodine* as an energetic therrpeutic agent. He uses it diluted with six parts of Glycerine, as a local application to the uterus; also with the Atomizer, for bronchial and pulmonary difficulties. Sometimes he combines it with crude (unrefined petroleum) Mecca oil. In a case, reported, of enlarged cervix, elongated and os patulous, the fundus anteflexed, its walls thickened, and very sensitive he used this local application, and constitutionally.

℞. Pyrophosphite of Iron, } ℥ss;
Bromide of Potassium, }
Aqua, ℥ oj. *M.*

A teaspoonful three times a day.

A writer in the *Philadelphia Reporter* recommends "Dr. Brinsmade's Diaphoretic Powder" as an improvement upon Tully's modification of Dover's Powder, and indeed claims its eligibility over any other anodyne powder:

℞. Morphiæ Sulph., ℥j;
Camphor,
Cretæ Prep.,
Sacch. Alb., *aa.* ℥xx;

Misceintim—Ten grains contain very nearly one-sixth of a grain of the Morphia. Given in a teaspoonful of cold water.

A resolution was entertained by the American Medical Association, that any physician who dispenses his own medicines in a place where there is a druggist, shall be sent into professional Coventry, branded as irregular. Another one, that he who contracts with families to do their medical business by the year, shall be hurled into the limbo of outer professional darkness. It is rumored that a uniform, in which the horse-hair wig, gold-headed cane and spectacles are to be conspicuous, is under consideration; also, the question of equipage: as to two, three, or four-wheeled carriages, and as to single horses or spans, and in either

case whether particolors are permissible. The New York physicians, it is said, are seriously exercised on the horse question, aside from colors, as Mr. Bergh has entered his protest against geldings, involving, as they do, violation of the statute in regard to cruelty to animals. Boston physicians are equally solicitous as to the other gender of the quadrupeds, since the publication in the papers by a Lowell physician, proving that obscure Malthusian causes are in operation in New England, tending to keep down, not only the excess, but even the present number of population. We expect both of these serious matters will be referred to appropriate committees at the next meeting of the national body. *Vive la bagatelle!*

The *Philadelphia Reporter* glorifies modestly on reaching its twenty-first volume. We congratulate our valued contemporary on its success and prospects.

Dr. Hayes reports, in the *New Orleans Journal of Medicine*, a case of *persistent priapism* successfully treated by Bromide of Potassium. He says: "The pathology of persistent priapism may, *a priori*, be ascribed to, or consist in an *erethism* or *morbid sensibility* or *irritability* of the *prostatic portion of the urethral canal.* Inflammation, extravasation, effusion of lymph, etc., being, when they occur, merely secondary complications. Under our own observation this symptom has occurred in connection with Bright's Disease, Spinal Meningitis, Cerebral Softening; in one instance an encysted tumor in the brain, very often in badly treated Gonorrhœa, chronic cystitis, rectitis — especially when involving that excess of mucus secretion which permits the presence of entozoa — and in numerous other cases of reflex action. Abundantly, it will be found to resist Bromide of Potassium, and the only hope will be first to ascertain, "*What is the matter?*"

BOOKS RECEIVED.

A PRACTICAL MANUAL ON THE TREATMENT OF CLUB FOOT. By Lewis A. Sayre, M.D., Prof., etc. New York: D. Appleton & Co. 1869. Pp. 91. S. C. Griggs & Co., Chicago. $1.25.

We omit the major part of Dr. Sayer's title page, consisting of a formidable inverted pyramid of accumulated honors, to swell which, he includes his membership of various state, county and city societies, as, also, his official position in one of them. Regarding the book as a means of advertising (albeit but little above the various advertising *dodges* of Quackery), this display is consistent, and entirely in keeping with the following two sentences from the first paragraph of his preface:

"Within the past month I have known of three instances where the tendo capchillis has been divided for talipes varus, and in each case by gentlemen of the highest standing in our profession. No censure is here intended, for the gentleman referred to but followed strictly the teachings of our standard authorities."

Lenient and forbearing author! how we admire thy goodness of heart! How fortunate the three "gentlemen of the highest standing" must deem themselves! One would naturally suppose that the author never found it necessary to divide the great tendon, but in the body of the advertisement he informs us that cases do occur when "it is absolutely essential, as a preliminary measure to all other treatment." Rumor hath it, also, that the author is famous as cutter of tendons, faciæ, and *other things*.

Our author further informs us that:

"*The Seat of Talipes* has always, until recently, been supposed to be at the ankle-joint."

That this is but a man of straw set up to be valiantly knocked down by our advertiser, is known to any medical student who has even looked at the pictures in the text books. But it is entirely in keeping with the general run of advertisements of the baser sort, to which the little book now noticed is own cousin.

THIRTEENTH ANNUAL REPORT OF THE BOARD OF GUARDIANS OF THE CHICAGO REFORM SCHOOL, to the Common Council of the City of Chicago, for the year ending March 31, 1869. Pp. 50.

ANNUAL ANNOUNCEMENT OF DEPARTMENT OF MEDICINE, Willamette University, Salem, Oregon, Session 1869-70. Address H. Carpenter, M.D., Dean.

INCIDENTS OF TRAVEL. to the American Medical Association, at New Orleans, May, 1869. By W. K. Bowling, M.D. From June number of Nashville Journal of Medicine and Surgery.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—AUGUST 1, 1869.—No. 15.

TRANSLATIONS.

Anatomical and Physiological Observations made upon Decapitated Subjects.

BY M. C. ROBIN.

From Robin's Journal de Physiol, etc.

(CONTINUED FROM LAST MONTH.)

VI—Of Some of the Phenomena of Reflex Action and of Contractility.

M. Duval observed in two criminals, in 1868, movements by reflex action of the most evident character:

"By *pinching* the skin, and particularly by giving it a sharp blow with the hand, the subjacent muscles were seen immediately to contract; the contraction subsided quite slowly. This experiment has been repeated a great number of times, especially upon the limbs. Amongst other muscles, the contraction of the deltoid, of the biceps brachialis, of the anterior muscles of the thigh, of the gastrocnemii, manifested themselves most clearly.

"In the first subject the reflex power persisted one hour

and three-quarters after decapitation. The reflex movements were always more slight and less prompt to develop themselves after the first hour; a more energetic excito-motor blow or a more forcible pinch became necessary.

"In the second subject reflex action was appreciable an hour and a quarter after death.

"The muscles of the neck were, during more than three-quarters of an hour, the seat of fibrillary contractions, very plainly visible of their cut surface, and that without any previous excitation, either mechanical or electric." (M. Duval, *loc. cit.*, p. 522, et *France Medicale*, Août, 1867.)

Dr. Dupri, his students and I, equally, observed in the criminal whom we had under our eyes, the phenomena of contraction of the muscles of the neck, such as those described by M. Duval. In all the muscles of the thorax and abdomen cut for dissection, contractions were produced also many times at more or less protracted intervals after the section, aside from all mechanical or physical excitement, which has moreover been observed in all the animals described soon after death. These contractions are certainly initiated by the novel physical condition of each striated fasciculus, induced by dissection, by the changes of temperature in the portion cut and exposed to the air.

I wish, moreover, to state that when we left the amphitheatre, at 9 o'clock, that is, more than three hours and a quarter after the execution, the fasciculi of the diaphragm cut and still covered by the pleura and peritoneum, still contracted from time to time energetically, almost in a rythmical manner, without physical or mechanical intervention on our part. We determined, in addition, contractions of the muscles of the abdomen and of the arm by pinching the skin, with or without torsion by the aid of the nails or dissecting forceps, the pinching being performed at the level of the muscle in which it was intended to excite contractions, care being taken not to compress nor to drag them. Contractions, inducing still greater prominence of the muscles, were obtained by striking the skin perpendic-

ularly to the direction of the contractile fascicule, either with the edge of the hand or with the back of the scalpel. But this cause of contraction is not of the same order as the pinching. By percussion, in fact, the muscular fibres are acted upon mechanically and directly, in spite of the interposition of the skin of the adipose tissue, and of the subjacent faciae, just as is done when a red muscle exposed is struck. On the contrary, in the case of pinching the skin followed by contraction of the subjacent muscles, the phenomena are upon the trunk of a decapitated criminal, of the same order as the movements by reflex action, properly so-called; that is to say, without the intervention of the direct cerebral acts of sensitive perception and of volition, the impression of the pinching is transmitted to the cells of the posterior horns of the spinal cord, then these by the intervention of their anastomoses with the cells of the anterior cornua placed at the same level, excite the motor activity of these last, which the tubes of the anterior roots transmit to the muscles.

Among the phenomena of this order which we have determined in the experiments above described, the most important is the following, observed about one hour after the execution. The right arm being extended obliquely alongside of the trunk, the hand about twenty-five centimetres outside of hip, I scratched the skin of the chest with the point of a scalpel at the level of the nipple, over an extent of eleven or twelve centimetres without making any pressure upon the subjacent muscles. We soon perceived the pectoralis major, then the biceps, the brachialis anticus perhaps, and the deltoid, contracting successively and rapidly.

The result was a movement of approximation of the whole arm towards the trunk, with rotation of the arm inward, and demi-flexion of the forearm upon the arm, a true movement of defense which projected the hand from the side of the chest towards the cavity of the stomach.

The thumb, which was demi-flexed towards the palm of

the hand, and the other fingers demi-flexed upon the thumb, exhibited no movement.

The arm having been replaced in the position which it had previously occupied, we saw it execute a movement like the preceding at the moment when the skin was scratched in the same manner a little below the clavicle.

This experiment succeeded four times, but upon each occasion the movement was less extended; after which the scratching of the skin induced nothing further than a contraction of the pectoralis major, scarcely involving the arm.

We moreover made no further attempts to determine if the innervation exhausted by exercise might be re-established, under these circumstances, after a certain period of repose, as in ordinary experiments upon the nerve, induced by reflex action.

When, after having made the different observations and experiments reported in the preceding paragraphs, we directed our attention to the head, and to the spinal cord, we found all excitability in this latter already extinguished, and we noted equally no movements from pinching the skin of the lips of the cheeks, of the conjunctiva, or from scratching the cornea.

We moreover had no electrical apparatus at our disposal.

The facts set forth in this paragraph only confirm, in man, those which so frequently established in different animals, since Prochaska, Legallois, Marshall, Hall, &c., show that, aside from all intervention of cerebral nervous acts, termed acts of perception and will, an inevitable functional correlation exists between this or that given surface, and the muscles which they cover, in consequence of this fact, that the tubes of the nervous roots, of the same pair, terminate in the same place, at the same level, in same mode, some in the integuments, others in the organs which they cover. If, on the other hand, the configuration and the insertions of the muscles, as well as the arrangement of the surfaces and of the articular ligaments around which they extend, be considered, the fact may be established that the

simultaneous and successive contractions of these muscles determine clearly a regular and co-ordinated movement, as well as automatic, and neither anticipated, spontaneous nor instinctive in opposition to what is as yet admitted by many of those who interpret and generalize these actions outside of the data of anatomy and physiology.

Touching the acts accomplished by the nerves brought into play in this case, they consist in a transmission by the tubes termed sensitive of the impression produced by the pinching, &c., as far as the cellules of the posterior cornua of gray matter, which by an act of innervation analogous to those of perception, so-called, but without being identical with them, exciting the activity termed motor of the large cells of the corresponding anterior cornua; motricity transmitted as far as the muscle of the tubes originating from these cells, and which form the net-work of the anterior roots and of the motor nerves.

It is especially these acts of motricity which have been particularly considered as of an intellectual character, inasmuch as the anatomical elements of the gray nervous substance and their connection have not been known.

But they can be accomplished in the cord, and they are independent of cerebral innervation, which, when it intervenes, effects only their excitation or modification in this or that direction, but does not supply them. It only commands without executing them.

The observations reported above agree on the other hand with the experiments of Brown-Sequard, which prove that muscular contractility persists for a much longer time after the cessation of the circulation in men and other large animals than in the smaller mammiferæ (Brown-Sequard *loc. cit.*, 1858 in 8vo, p. 354).

Condition of the encephalon and of the skin.—We will add here a few anatomical remarks upon the preceding physiological data.

The skin of the criminal above referred to, submitted to our observation the morning of the fifth of September,

1868, the body being still warm, did not present to us the condition of cutis anserina; the muscles of the lower limbs began to exhibit a slight cadaveric rigidity, when we had left it three hours and a quarter after the execution. The penis was flaccid, not retracted. On the contrary, the two other criminals of whom I have spoken already, observed in the laboratory with MM. Legros, Goujon, etc., the one on the tenth of March, the other on the twenty-eighth of November, 1867, in a sufficiently low temperature, the first six and the second ten hours after the execution, had the skin in the condition of cutis anserina in the highest degree.

The corpus cavernosum was retracted and hard, as in a man emerging from a cold bath. The cadaveric rigidity was general without being extreme in the latter.

The preceding facts exhibit very well the influence of cold, and the absence of all sanguineous congestion in the production of furrows and rugosities of the skin, characterizing the preceding state.

In the first of the criminals observed in my laboratory, and who was about twenty years of age (Lemaire), the weight of the brain, the pia-mater and the medulla oblongata included, was 1,183 grammes. It was remarkable by its flatness, by the narrowness of the anterior lobes, which constituted upon the sides of the mass considerable and abrupt ridges.

The pia-mater was remarkable by its extreme tenuity and especially by its adhesion to the gray substance of the convolutions. This adhesion was such that it was impossible for M. Legros to raise up this membrane without dragging with it a portion of the superficial gray substance of the thickness of one or two millimetres. It was necessary to abandon this operation after having raised several square centimetres of this envelope and crushing the encephalon remaining in position.

In the two other subjects the pia-mater, perceptibly thicker, without exceeding the normal thickness, was read-

ily detached from the surface of the convolutions without tearing up their substance.

The encephalon of the one of these who was more than sixty years of age (Davilain or Avilain) weighed 1,277 grammes, the pia-mater included. That of the last criminal, aged about thirty two years (Blanc Gonnet), could not be weighed while still warm. The white and gray substance had a consistence a little more firm than what is ordinarily observed in autopsies. Neither offered anything particular regarding conformation or volume of the encephalon.

In these two latter the walls of the cerebral ventricles and of the fourth ventricle were found in contact, simply moist, with only a few drops of serosity in each of the ancyroid cavities and in the anterior portion of the third ventricle.

VII—Remarks upon Certain Tissues and Fluids of the Economy Observed in the Recent State.

In the two criminals whose lungs were observed, the one at six or seven and the other at ten or twelve hours after death, the posterior portion of the lower lobe of these organs had become livid by hypostatic congestion of the capilaries. The other portions of the pulmonary tissue had the grayish color, the marbled aspect, with some black interlobular marks, which are ordinarily observed in the dead body.

In the oldest of the subjects the apices of these two organs were emphysematous, with a little air in the interlobular spaces, especially in the right.

In the last of the criminals the lungs, still warm, presented no hypostasis; they presented the color already indicated. The summits of the two lungs, especially that of the left, were sprinkled with *gray granulations*.

The color and consistence differed in no respect from that which are observed in the lungs of subjects upon whom autopsy is made from twenty-four to forty hours after death.

Near the apex of the left lung there was a corrugated cicatrix and cavity of the size of a nut, filled with pus, surrounded with tissue rich in gray granulations. The consistence and the color of this morbid product, yet warm, did not differ from what is observed in autopsies of analogous cases.

The same was the case with the adhesions existing between the pleura pulmonalis and the pleura costalis.

In the three subjects the spleen was firmly contracted upon itself. Its tissue had nearly the consistence of that of the liver. Its lacerated surface was irregularly granular, and gave only *splenic pulp* when scraped.

The tissue of the liver uniformly of a reddish brown, without distinction of two substances—the one red, the other yellow—exhibited as granulated fracture and the consistence habitually observed in autopsies.

In the subject whose abdomen was opened one hour after death, and whose viscera were yet warm, more peristaltic contraction of the intestines was observed even after pinching. The abdominal viscera exhaled no intestinal odor, but only a slight odor of stale meat.

In the subject whose abdomen was opened seven hours after death, the organs exhaled a slight odor usually termed intestinal. It was likewise apparent, but decidedly more marked, in the one whose abdomen was opened twelve hours after the execution. In this last, the organs contiguous to the fundus of the gall-bladder were tinged slightly greenish, whilst they were not at all so in the two others.

The color of muscular coat of the intestine was a pale, semi-transparent gray, slightly reddish, and that of the bladder was, on the contrary, of a pale, semi-transparent gray, slightly bleached; this color, in fact, did not differ sensibly from that observed in subjects submitted to autopsy, in which these tissues have undergone no morbid alteration. *Intestinal Mucus*—In two of the subjects the mucus and the intestinal contents, examined by MM. Goujon,

Legros, and myself, gave an acid reaction from the cardia to the rectum inclusive. The acidity, very marked throughout the entire stomach, was on the contrary very feeble in the duodenum and the cæcum, and then diminished progressively throughout the remainder of the large intestine. These two subjects had died during the digestive process, the jejunum and the cæcum alone, each contained several cubic centimetres of gas.

In two of the subjects the contents of the small intestine, as far as the middle of the ileum, were of a creamy consistence, of a whitish gray color; it had, indeed, all the characteristics attributed to chyme in the descriptions of authors.

In the other subject, who had eaten quite a large quantity of green leguminous food, the chymous paste had preserved this color, and exhibited a consistence a little more pasty than in the preceding. The prismatic cells of the epithelium of the small intestine were filled with fatty granulations, which rendered them opaque.

In these, as in the mucus of the small intestine, and often also in that of the stomach, there are found in all subjects dead from disease, observed from twenty-four to forty-eight hours after death, numerous short and rigid filaments of *Leptothrix* (bacteria). Sometimes, also, Vibriones or *Spirillum* are seen. Now, in the first of the subjects the examination of the mucus of the duodenum, and of the rest of the small intestine, made about eight hours after the execution, showed none of these filaments nor any vibriones.

In the second the examination, made about thirteen hours after death, showed a small number of *Leptothrix* only, and no vibriones.

BILE.

In three subjects the gall-bladder, almost full, contained about thirty grammes of bile. In one of them, collected while warm, it had a stale, slightly nauseating odor, but without any other well-defined characteristics. It presented the same characters, to a little less marked degree,

in the two other subjects studied in this point of view nine hours and twenty-eight hours after death.

Whilst very mobile and fluid this liquid, in the three subjects was very ropy when it was poured from a height, or when the finger was applied to it and then withdrawn. This last characteristic disappeared after ebulition.

This bile did not change, sensibly, either blue or red litmus paper; whilst at the end of a quarter of an hour of contact the red litmus paper had resume, to a slight degree, its bluish color.

Before and after ebulition it had, to a very decided degree, the bitterness peculiar to bile, the taste which is imparted to it by the tauro-cholate or choleate of soda.*

Its color was a fulvous brown, with greenish, semi-transparent reflection in one of the subjects; in the second it was semi-transparent, of a pale fulvous yellow, not greenish; lastly, in the third, examined scarcely two hours after death, it was remarkable for its deep orange yellow tint, broken by some small clots of the same tint, but nearly opaque, and it has communicated this same tint around the pancreatico-duodinal orifice, over a surface equal in size to that of a five-franc piece.

These facts are important to be noted because they show, with others, that bile, normally secreted, can present not only very great variations of tint (voyes Ch. Robin, *Leçons sur les Humeurs*, 1867, p. 537), but even with varying proportions of its coloring matter to the degree of being almost colorless, if only a few drops be observed at a time.

Moreover, may we not consider as demonstrating that the bile is colored more and more deeply during its retention in the gall-bladder, the fact cited by Aran, who observed bile transparent and scarcely colored issuing from a

---

*It is well known that Sassaigne has determined the absence of picromel (impure cholate or choliate) in the bile of the fœtus of the cow at six months, with chloride of sodium of carbonate of soda, and of phosphate of lime recognized in the meconium. (Annales de Physique et de Chimic, Paris, t. 17, p. 304; 1821.)

trocar (canula ?) plunged, by mistake, into the substance of the liver (See Liegois, art. Bile, du Dict. Encyclopédeque de Médicine, Paris 1868, t. IX, p. 267.)

Its color did not change by exposure to the air, before, as after ebulition.

Examined with the microscope, before the action of heat, the bile exhibited only prismatic epithelial cells, without vibratile cilia, as those of the mucus surface of the gall-bladder, some isolated other juxtaposed to the number of from two to ten or thereabouts. Left at rest it deposited at the bottom of the vessel a slight turbid deposit, composed of cells and little microscopic flocenti of mucus. It exhibited neither *leptothrix* (Cacteria) nor vibriones which are contained in the bile of nearly all dead bodies at the time of examination. It exhibited aslo some few minute drops of fat. The little clots or flocnti which it held in suspension were composed of semi-fluid mucus interspersed with grayish granulations, agglutinating some epithelial cells, and some fatty drops, and becoming striated in contact with acetic acid.

Moreover, acetic acid poured upon fresh bile caused it instantaneously to be converted, as is seen habitually, into a yellow mass, forming filaments, the floculi adhering one to another; the substance of these latter appearing granular and striated under the microscope; it contained many spherical yellow drops, frequently voluminous, of an oily or resinous aspect. At length these floculi were deposited at the bottom of the test tube, and were no longer easily mingled with the remainder of the liquid by agitation. Sulphuric acid acted at first like the former reagent, but rapidly changed the mass into a reddish brown. Nitric acid rendered the bile thick, very much clotted, then successively greenish, of a blackish green, reddish, then finally left it grayish and decolorized. The same effects are produced by these acids upon the previously boiled, whilst the liquid is then a little less flocculent. Fresh bile from dogs exhibited the same effects under these reagents, but it remained violet after the action of nitric acid.

The bile of these two subjects and the bile of a dog recently killed examined comparatively, boiled, became of a greenish-brown, and there were developed little grayish clots sparsely floating in the liquid, depositing themselves at the bottom of the test tube in a thick stratum of several millimetres in a depth of liquid of seven or eight centimetres. Although changed to a deeper tint, the supernatural liquid remained more limpid than before, having no longer the slightly turbid appearance which it formerly exhibited when it was examined by transmitted light. Moreover, it ceased to be filamentous, as before.

The little clots, formed under the influence of heat, were friable, easy to be separated formed of a finely granular non striated substance, and enclosing a few fatty granular anp broups of prismatic epithelial cells.

It will be perceived from the preceding that it is not perfectly correct to say with some authors (See Vulpian, *le Foie et la Bile, Reone, des Cours Scientifiques*, Paris, 1867, p. 46) that the bile coagulates by heat, for that which coagulates by heat is the mucus superadded to the bile by the mucous membrane of the gall-bladder, and only in very small quantity (See C. Robin *Leçons sur les Humeurs*, 1867, p. 473 and 547). Schultz, Berzelius, Dumas and many other observers have moreover asserted, for a long time, that bile does not coagulate by heat.

Besides, science demands still that a comparative examination be made in the preceding regard, between the bile flowing from the hepatic duct, before its arrival at the gall-bladder, and that which has already remained in that receptacle.

Acetic and nitric acids likewise coagulate this mucus, but beside, they precipitate the tauro-cholic acid in the state of little resinous drops. As to the coloring matter, they attack it likewise; but it cannot be determined if this action is such as will permit bile to be classed among the liquids coagulable by acids; for it is not yet known whether they

cause it to undergo a true coagulation, after the manner of that which they produce in casein, for example.

GENITO-URINARY ORGANS AND SEMEN.

In one of the subjects the bladder, the seminal vescicles and the prostate were removed in examining the rectum, about two hours after the execution.

A primary fact attracted our attention in this subject: the absence of all urinous odor, or of that usually termed intestinal in these organs, and in the surrounding lammillar tissue, on the contrary to what is observed in these parties in all autopsies, from twenty-four to forty-eight hours after death. Thirty hours later, notwithstanding the retention of these tissues in a jar, in a temperature of twenty to twenty-five degrees (centigrade), they had assumed no cadaveric, urinous nor fæcal odor. It had still only the faint odor of fresh tissue.

In the second place, we, with M. Dupre and his students, remarked the absence of all odor in the semen expressed from the cut vasa deferentia, and from the opened seminal vescicle, even after rubbing the liquid between the fingers. The milky fluid expressed from the prostate gland upon the side of vera montanum presented to us the same absence of all odor either spermati, intestinal or fæcal. Thirty hours later this liquid was yet inodorous.

It is after observations of this sort, made upon men and animals, that I have detected that, taken isolated, the fluids which unite to constitute the semen do not exhale the peculiar spermatic odor, and that this is not developed except at the instant of ejaculation (*loc. cit.*, 1867, p. 361).

Without observing what might be the odor of the contents of the seminal vescicles in the subjects examined by him, M. Duval asserts that he has discovered a very different odor from that which is exhaled during life. (M. Duval Congress Médicale, 1867, p. 527.)

The semen expressed from the divided vasa deferentia was thick, of a creamy consistence. That of the seminal vescicles was heavier than water, of the consistence of jelly, of a yellowish gray color, semi-transparent, neither lactescent nor opalescent. It was clotted under the finger; neither viscous nor filamentous.

Six hours after, microscopic examination demonstrated that this clotted condition was due to the presence of sympexia, many of which were more than the tenth of a millimetre in thickness, agglutinated together, and containing encysted spermatozoa.

The free spermatozoa moved actively. Thirty hours later they were motionless, and the semen had lost its gelatinous consistence, and its clotted condition to become diffluent and less transparent than before. The *sympexia*, especially, were not liquified; but they were no longer agglutinated together.

The prostrate liquid, examined at the moment of the autopsy, and several hours afterward, was of a milky color, quite fluid, composed of a colorless fluid, holding in suspension fine granulations and fatty globules, some prismatic epithelial cells and some hyaline drops of a viscous consistence.

The urine contained in the bladder was clear and inodorous.

In the two other subjects observed from six to seven hours and twelve hours after execution, the semen of the vasa deferentia was semi-fluid, of an opaque, creamy, slightly yellowish white color. That of the seminal vescicles was semi-transparent, grayish in the younger, of a yellowish white in the elder; it was neither viscous nor filamentous, nor granular; it was free from *sympexia* in one of these, and presented a few in the other; it was free from all spermatic and had only a urinous or slightly fæcal odor.

This fact should be associated with the absence of all odor of this kind in the cellular tissue of the fundus of the bladder, in the surroundings of the rectum, and in the

seminal vescicles, in the subjects whom M. Dupra, his students, and myself have examined in this regard about two hours after death. It shows that the fæcal or urinous odor of these parts, and of the semen of all subjects examined from twenty-four to forty-eight hours after death (see Dieu *recherches sur le sperm de veillards*, *Journal de l'Anat. et de la Physiol.* in 8vo, p. 462), is due to the gradual imbibition of the odorous principles of the urine and the fæces, and that it does not exist before this imbibition.

Thirty-six hours after death all the spermatozoa were motionless; but by warming a portion up to a temperature of forty degrees (centigrade) we saw one or two per cent. of the spermatozoa resume feeble movements, although sufficiently energetic to determine their progression.

In the three subjects, the urethral mucus contained a few spermatozoa, free epithelial nuclei, regularly polygonal cells, with one or two voluminous nuclei, large flattened polygonal cells of the size of those of the œsophagus. Some of these different cells were hollowed with hyaline excavations.

The movements of the vibratile cilia of the epithelial cells of the trachea were still very energetic thirty hours after the execution.

PERICARDIAC AND VAGINAL SERUM.

In the three subjects the internal surface of the pleura and of the peritoneum was slightly humid, but contained no liqnid, notwithstanding the presence of pleuritic adhesions, and of gray pulmonary granulations in one of them. The pericardium of one of them was in the same condition, as were the tunicæ vaginales in the two younger. The pericardium of the subject aged twenty years contained about thirty grammes of serum as limpid as water, without viscosity, semi-transparent, of a citron yellow and neutral. It became white and milky, without solidifying, by the application of heat.

This liquid, collected twelve or thirteen hours after death, left at rest, became, all at once, transparent, and yielded a thin layer of grayish deposit. This last was composed of quite large flakes of tessalated epithelial cells rolled up or flattened, resulting from the desquamation of the epithelium of the serous membrane. There were, also, isolated cells. Of these different cells isolated or aggregated into flakes, some were very small, finely granular, grayish; others were five or six times larger than the preceding, non-granular and transparent, with large, pale, oval nuclei.

This subject had a small hydrocele on the right side, formed by a neutral liquid, of a citron color, limpid, coagulating by heat.

The kidneys of the same subject contained each two or three cysts of the size of a nut, filled with a colorless liquid, clear and limpid as water, and neutral, and which was rendered white and opaque by heat and nitric acid, without being coagulated.

The Medical Profession and the Public—A Plea for Popular Professional Education.

BY JOHN WILLIAMSON, M.D., CHICAGO.

More than any other is the medical profession not in the popular sympathy. The people know nothing of it, and they seem to care less. This is not as it should be, for the profession's sake and the people's. When any one gets sick, without the preparatory knowledge fitting him to discriminate, he sends for what he has learned to call a "doctor." A "good doctor" is to him, not of necessity an educated and refined gentleman, whose versatility of cultivation is his best guarantee of professional excellence, but a man of "good judgment" and "great memory," who remembers a great variety of medicines sure to make a sick person well. There is nothing the public so much demand

of the medical practitioner as "experience," and I am quite sure nothing is more perplexing to the unfortunate young physician than this tormenting exaction. To be trustworthy, a "doctor" must have seen very many similarly sick. The intelligent student of medical experience, on the contrary, is perpetually vexed with its conflicting caprice. He would gladly forget his experience. In no other profession is it so unscientific, and, if trusted, so mischievous. Adaptation of intelligent skill to unrelated exigencies is the qualification essential to medical success.

To some "school" of medicine, too, the public always assign the "doctor." To the defense of this "school," the people say, every other consideration is with him subordinate. The people cannot see why schools of medicine are impossible, and the profession will not inform them. In a profession where neither a diagnosis nor a prescription can be repeated, the unity of judgment required to form a "school" is of course forbidden. As well establish conflicting schools of chemistry or divide geometry by the distinction of sect.

So, unfortunately, has the medical education of the masses been neglected by the profession, that I doubt if two per cent. of really intelligent men could tell why one man is a medical "quack," and another a skillful physician. For this state of things the medical profession is altogether responsible. The people do not understand the fundamental canons of medicine. They do not know by what kind of reasoning the profession reaches its conclusions. In consequence of this deficiency of knowledge, medical attention is popularly sought and retained by adventitious partialities. Disease is regarded as an invariable unit, to be combatted by uniform treatment. The people do not see that the philosophy of practical medicine admits of no generalizations, and medical art, in consequence, of no specifics; that reason, rather than memory, is invaluable to guide to successful therapeutics.

The medical profession will never be honored and trusted to an extent commensurate with its merits until the people, its patrons, are by it educated to discriminate familiarly in medical thought. There is no reason why medical men should not instruct the people in medical knowledge. The details of the science must, of course, ever remain with the profession, but the genius of our argument should be understood by all. The people are both honest and intelligent; to be endorsed by them we have but to explain ourselves. No one can see the truth more quickly or embrace it more heartily than the intelligent, though technically uneducated, laity. To say that we can not tell the people what we know, because of the unavoidably scientific conception and expression of our knowledge, is untrue. What one man knows he can communicate to another. Thought, unimpaired by the adaptations of language, is ever communicable. It is not the thought, but the expression, of medical science that repels popular familiarity. With no other class of knowledge are the people more thoroughly interested. An acquaintance with human anatomy and physiology underlies every other successful investigation of the human economy.

No one need fear that to thus instruct the people might eventually dispense with the medical fraternity. The dignity of the profession would be exalted by making those who trust it intelligently critical. It can not be seriously believed that the public safety would thus be endangered. Superficial students of medicine would not then assume the functions of the practitioner, though this affirmative is persistently entertained. Men generally, as we find them in relation to medical knowledge, know just enough, experimentally, to make them annoying and dangerous. With adequate enlightenment the difficulties besetting the best physician are sufficiently known.

Intelligence is always cautious. Of nothing are the ignorant so reckless, and the intelligent more careful, as the human body. Without an acquaintance with primary physiology, from every abuse the restorative powers of medi-

cine seem competent to recover. To the protection of the most cultivated art intelligence always intrusts its most sacred cares. Knowledge sufficient to be critically, but not remedially correct, is what we maintain for the people. "A little knowledge is a dangerous thing," but it is all any of us possess. Opportunities of danger are in proportion just to the revelation which our knowledge makes of them. The amount of one's knowledge is purely relative. The man of great knowledge is the man of great danger.

If we know certain things concerning health and disease, demonstrably, why not tell the people? When the truth is told and proved, no position opposed to it can be maintained. The "quack," then, has no opportunity. The intelligent people will then demand minute conformity to what they have learned as fundamental.

Medical men, in assuming to say that no one is competent to reflect upon the laws of health and disease but the professionally educated physicians, betray a disingenuous pride. There is every reason why the people should thus think. As long as medical men keep profoundly their secrets, the people have no means of distinguishing them from the great body of obvious pretenders. And why should they have? How is the public to decide? What qualifications are they to seek? By what marks may the medical scholar be known? Is he invited to labor in a field where the results of industry and talent are unknown? Must he possess what he can not illustrate, and defend what he can not exhibit? The people say a physician must attest his merits by his successes—he who cures most is most deserving. No criterion could be more fallacious. The people are not competent to award professional success. The veriest charlatans display the most numerous authenticated testimonials of success. Let the primary facts and philosophy of medical science be popularly explained and discussed, and then the merits of a physician may be decided by the measure of his success. The "successful doctor" is now one who possesses the power of convincing his patrons that nature is never a sovereign restorer without his supplementing aid.

To incite popular inquiry here would not be difficult. The injunction "know thyself" is no more obligatory than desirable. What men should do, fortunately they here profoundly feel like doing. Not one conformity to the laws of life, or deviation from them, which they from time to time experience, but what is full of interest to them and easily understood, if divested of a vernacular whose terminology is not absolutely barbarous. The theologian finds no difficulty in securing the attention of the people when the most intangible and abstract propositions are considered. The adjustments of legal questions are of absorbing interest to every one. Why, then, should not medicine, a science profound and faithful, equally merit popular attention? The *knowledge* belonging to both Law and Divinity is *intuitive;* the *reflection* and *argument* are exegetical and precedented. Knowledge in medicine is eliminated by that exacting co-ordination of logic, induction.

These simple facts the profession should see to it that the people understand.

If the best culture of our profession would write our great and interesting facts, divesting their expression of needless technicality, there is nothing the people would read more readily. Appreciating the demonstrations of our logic, and learning to respect the ardor and honesty of our experimental research, they would exclude from all patronage those swarms of scoundrels who now infest the unwary public.

A few suggestions, to make available what has been said, may be appropriate.

The measure of popular consideration secured by the profession rests with itself. If we are understood, we will be appreciated. Our favorable introduction to the public as men and scholars must come through our now unfortunate patients. They must be intelligently impressed, not only with our individual ability, but with the dignity and absolute truthfulness of our calling. That this impression may be made and may continue, when called to any case of

disease not involving the judgment, the practitioner should fully explain the nature of the difficulty and the philosophy of the treatment proposed. To the extent the physician understands the case he can communicate his knowledge to his patient, and, if judiciously, with surpassing profit. In this way he may counteract the ludicrous and often mischievous absurdities of domestic diagnosis and remedy, and, at the same time, secure a profitable review of his own attainments. This fact need not be disguised, that to *appear* competent is as essential as to *be* competent. Appearances, critically construed, are the exclusive means of signifying realities which are fundamental. There is nothing the people like better than reasons assigned and demonstrations exhibited. Medical terms and formula must be eschewed, and the plainest words and reasonings employed. The capability to understand and profit by these explanations must be presupposed by the profession.

To epitomize what I have to say concerning these things, the following summary is offered:

1st. The popular idea that scientific and ordinary knowledge are different, must be corrected.

2d. That public familiarity with the genius and philosophy of medicine would ensure general insecurity.

3d. That adaptation of medical thought and expression to popular taste and comprehension would detract from professional dignity.

4th. The best writers and thinkers in the profession should contribute largely to its popular literature.

5th. A thoroughly appointed periodical literature should be furnished the people and pressed upon their attention by the profession until generally accepted.

6th. The individual practitioner should consider his patient entitled somewhat to his didactic instruction, as he is to his remedial skill.

7th. Books upon systematic medicine, exhaustive and reliable, but popular, should be available to gratify a public taste earnestly longing to be informed.

8th. The popular lecturer in these inviting fields, instead of being as now, an ignoramus or itinerant mountebank, should dispense the best thought of the profession.

9th. General as well as technical scholarship must be exacted of every physician by colleges conferring degrees, or intelligent men of other professions will ridicule our scientific assumptions and gainsay our arguments.

10th. The medical profession must undertake to constitute and exemplify a factor of that great composite, the general public.

FOREIGN ITEMS.

Puerperal Hæmorrhage arrested by Iodine Injections.

M. Dupierris, of Havana, reports to the *Gazette des Hopitaux*, Paris, his experience in the use of iodine injections for the arrest of uterine hæmorrhages. Commencing as far back as 1835, with the application of the tincture of iodine upon pledgets of lint to the cervix of a cancerous uterus, and succeeding thus in arresting an otherwise uncontrollable hæmorrhage; he contined to use it to control metrorrhagia, diluting it with two volumes of water; and still later as an intra-uterine injection. He has subsequenty used the tincture of iodine frequently as an intra-uterine injection in cases of puerperal hæmorrhage, with great advantage and without accident.—*Gazette des Hopitaux.*

Ovariotomy.

Since his last report (June, 1868), M. Kœberle has performed this operation twenty-five times (up to April 1st, 1869), and tabulates them thus:

Without adhesions,	8 cases;	8 cures.	
With slight adhesions,	10 "	10 "	
With important adhesions,	7 "	2 "	5 deaths.
Total, . . .	25 cases;	20 cures;	5 deaths.

Among these twenty-five new cases there were six patients aged from 48 to 65 years. Of these, one aged 52 years died. There were three cases of double ovariotomy. These three cases were followed by recovery.—*Ibid.*

Bromide of Potassium.

Doctor August Maréchal, in summing up the new facts lately elicited, favorable to the treatment of epilepsy with this remedy, commends most highly the syrup of bromide of potassium, exempt from iodine, prepared by Mr. Henry Mure (Pont St. Esprit, Gard), and assigns the presence of iodine, or chlorine in the salt, as the cause of the gastric irritation, diarrhœa, loss of appetite, and emaciation sometimes consecutive upon the use of the bromide. In the same connection he quotes M. Prof. Sée (of la Charité), who asserts that "a new era has dawned for epilepsy; certain cases may be modified, others may be completely cured."

M. Becoulet, adjunct physician for the Hospital for the Insane, at Auxerre, says: "Bromide of potassium has a real and useful action upon epilepsy. By its sedative action upon the whole system, it calms the accessions of madness consecutive to epilepsy, even when the attacks persist. Experiment with an agent which has already produced such fortunate results, should be continued with ardor."

Traumatic Tetanus.

Dr. Buchon (of Quingey) reports to the *Gazette des Hopitaux*, of May 29, a case of tetanus, resulting from extensive burns upon the lower extremities, occasioned by falling into a vessel of boiling acidulated water. The patient being a factory operative, aged thirty-eight years, immediately after the accident, had plunged into a river. The tetanic symptoms, supervening upon the eleventh night, were ushered in by recurrent lancinating pains in the left heel (that of the burned leg), extending into the leg and foot, occasioning cramps and separation of the toes (in the language of the patient "like a fan or a pigeon's wing"), closing of the jaws which, even during the intervals of the paroxysms,

could not be freely opened. The determining cause of this complication appears to have been cold resulting from the diminished temperature of the room, occasioned by leaving a door open during the fifth night. The patient was first treated with laudanum, the result of which, after two days, was an exaggeration of all his symptoms already existing, with the addition of great gastric irritation, for which seidlitz was prescribed—opium having thus far failed, as chloroform on two former occasions. Dr. Buchon next administered bromide of potassium, four grammes (about a drachm) during the day. This was followed by slight amelioration of the paroxysms and diminution of the sweat; but three days afterwards the lancinating pains in the heel, with the cramps, returned with all their former intensity. An addition of one gramme (15 grs.), to the dose, of bromide, resulted in a new amelioration. Suspecting the establishment of tolerance, and to avoid being forced by the intensity of the paroxysms to increase the dose, in order to control them, Dr. B. added, every two days, one gramme (15 grs.) of bromide to the quantity already administered (daily). This gradual increase was continued up to eight grammes (about two drachms) daily, and resulted in gradual diminution, and finally in complete cessation of the disease.

Dr. B. remarks further that the paroxysms occurred sometimes spontaneously, even under the influence of five grammes of the salt daily, although they were then most frequently reflex, the slightest touch upon the great toe of the left side being sufficient to induce a recurrence.

There was likewise in this patient, during the latter part of the treatment, a brownish (bistre) discoloration of the skin (he asks, was it an effect of the bromide?)

It was moreover demonstrated, in this case, to be necessary to administer the salt in divided doses, at short intervals, rather than in larger quantities, after longer periods of time, so that the patient may be kept continually under its influence until the final extinction of the disease.

Atropine Intoxication.

A curious case of delirium has recently occurred in the service of M. Richet (Paris), the subject being an old man, into whose eyes a half milligramme (about .0075 of a grain) of atropine in solution had been dropped twice daily for a week.

The delirium resembled the subdelirium of typhoid fever, the patient being able to reply to questions, when his attention was fixed. This condition was at first supposed to be due to purulent infection from a recent anthax, and sulphate of quinine was administered, especially as the delirium presented very marked exacerbations at the same hour of each day. Under this treatment the patient became so violent as to necessitate the application of the strait-waistcoat. Upon the discovery of the real cause, the use of the atropine was discontinued, and the morbid condition disappeared immediately.

The *Gazette des Hopitaux* urges the necessity of extreme caution in the administration of powerful therapeutic agents in the cases of unusually nervous people, the anæmic, children, and old men, in whom nervous equilibrium is less stable.

M. Richet also narrates in the same journal (June 26, 1869) a case of acute cystitis, asserted to be produced by the exhibition of *silica of the thirtieth dilution* by a homœopathist. When the discovery was made that the patient had a blistered surface which he dressed daily with cantharidine ointment, and this had been removed, the cystitis disappeared and the *silica* ceased to reproduce it.

Dr. E. Brown-Sequard communicated to the Imperial Academy of Medicine, Paris, at its meeting March 16th, 1869, two interesting facts observed by him in some recent experiments, in consequence of injuries to the restiform bodies. The first fact referred to is the occurrence of hæmorrhage under the skin of the ear; the second is dry gangrene of the ears.

A third fact observed by the distinguished experimenter is that lesions of the sciatic nerves induce absolutely the same results as do those of the spinal cord.

Ingestion of three grammes (three-fourths of a drachm) of croton oil by a child of six years. Violent vomiting, slight diarrhœa, rapid recovery.—Dr. Manvezin, *Gazette des Hopitaux*.

A little girl six years of age, affected with a slight impetigo of the upper lip, took, by mistake, and not without great objection, three grammes of oil of croton tiglium in the morning, fasting, in a cup of coffee. She complained of the detestable taste of the medicine and of the pricking which she felt at the isthmus of the fauces, even at the moment of swallowing. Soon afterwards she experienced acute pain in the epigastrium, speedily followed by violent and very profuse vomitings, during nearly three-quarters of an hour.

After having vomited she sank into a profound sleep remaining in that condition for four hours, at the end of which she asked for food. Her parents gave her some soup; the child felt no more pain either at the epigastrium nor in the abdomen. She had but two scanty, loose evacuations of the bowels.

The next day I saw the child; she did not appear indisposed; the throat was not red; no eruption was perceptible; but at the commissure of the lips, on the right upper eyelid, and upon the left buttock were some patches of minute vesicular eruption, such as croton oil ordinarily produces, and doubtless caused by contact of the hands of the child, smeared with the vomited matter, with those parts of the body.

The oil swallowed was proved to be of excellent quality, and produced upon the skin, in a very little time, an abundant vesicular eruption. How is this apparent harmlessness to be explained? Why were there not more numerous evacuations?

The violent vomiting doubtless expelled the greater portion of the oil; but did there not remain in the stomach *a single drop*, a dose usually sufficient to produce violent purgation in a child of that age? How far did the soup, taken *four hours after the ingestion of the oil*, contribute to neutralize the action of the poison? are questions worthy of consideration.

The medical societies of London are about to fuse in order to form an Academy of Medicine.

The initiative has been taken by the Medico-Chirurgical Society, and the Obstetrical Society is about to follow its example.—*Gaz. des Hop.*

A Pharmaceutical Congress, to which representatives from all *civilized nations* are invited, will take place in Vienna in September next.

Several important questions of public interest will be discussed. Amongst others the subject of a universal Pharmacopœia, with the view to obviate the difficulties in the preparation of foreign prescriptions with medicines prepared according to another pharmacopœia.

EDITORIAL.

Criminal Carelessness.

The morning papers of August 2d contain the following verdict of a coroner's jury:

"We, the jury, find that the said George H. Deming came to his death from an overdose of *aconite*, administered for brandy by one J. J. Harrington, druggist, on the corner of Illinois and Rush streets; and from the testimony adduced, we, the jury, believe that the said Harrington was guilty of criminal carelessness in not having his bottles plainly marked, and in their proper places, through which means the mistake occurred which led to this fatal result."

Another sample of "crowner's quest law," to which an admirable parallel may be found in Hamlet, act V, scene I. The man is dead, "the coroner hath sat on him, and finds it *misplaced bottles*. Nothing whatever is said of the criminality of tampering with human life by persons who can not, upon any hypothesis, be supposed to know anything about the principles of medicine. Had the brandy been administered in accordance with the intentions of the druggist, the verdict of the jury, *criminal carelessness*, would have been quite as appropriate.

We have no desire to add one jot to the punishment which this man's conscience will inflict upon him, and believe that it alone will be a sufficient atonement for his fault. Not upon his shoulders alone should the lash be laid, but upon those of the public which sanction and sustain the practice of tampering with human health and life, prevalent amongst some (we are glad to say, not the best) apothecaries in this city. What would have been thought of the apothecary who should have attempted to amputate the man's leg, had it been accidentally injured, and thereby occsioned his death? Would the verdict in such a case have been "*criminal carelessness*" in not properly ligating the vessels? or would it have been willfully endangering human life in presuming to attempt what he knew he could not perform? If this had been the first case of the sort, there would be some apology for the evasive chnracter of the verdict above quoted; but when it is well known that drugs of the most deadly nature are daily and hourly prescribed and sold by apothecaries' clerks in this city, upon no other warrant than their own natural judgment; when it is also known that a large proportion of the suicides are thus supplied with the means of self-murder, it seems much more appropriate that their own verdict, "criminal carelessness," should be found against the coroner's jury by that higher tribunal, public opinion.

Amende Honorable.

We sincerely regret that, by a most unaccountable inadvertency, there was allowed to appear in the number of of THE JOURNAL for July 1st, a letter over the signature of George R. Welding, M.D., reflecting upon Mr. S. S. White and Dr. Geo. J. Ziegler, of Philadelphia, respectively the publisher and one of the editors of our highly esteemed and valuable contemporary, the *Dental Cosmos.*

We believe that the communication referred to is both false in statement and calumnious in design, and most heartily beg pardon of our readers for its infliction upon them.

The *Dental Cosmos* is highly creditable to its publisher, Mr. White, and to the dental profession; and Dr. Ziegler discharges the duties of his editorial position with rare fidelity, industry and excellence.

Names Again.

There is no more annoying circumstance than similarity of names in a large city like Chicago and San Francisco. Our contemporary of the *Pacific Medical Journal* is under constant tribulation from an assumed namesake, who sells *Patent French Safes!* and runs a quack infirmary especially for the convenience of veterans wounded in venereal wars. In this city our colleague, Prof. Moses Gunn, whose reputation both as a teacher and surgeon has been won by nearly a quarter of a century of toil and vast experience, is every day confounded with a new comer, perhaps of the same name, who has gained a handle to his cognomen by adroit connection with a so-called *Eclectic* concern recently hatched by the sapient legislators of Illinois, in anticipation probably, of the good time coming when none but M.Ds. can practice in this commonwealth. A rose by any other name will smell as sweet—why not a quack doctor?

Ludicrously enough, in one sense, if it were not for the trouble to which it subjects patients, the new city directory, *probably* again under the influence of some adroit manipu-

lation, puts down the residence only, of Prof. Gunn, several miles distant from his office, which is at Rush Medical College, and labels him "physician" only. The namsake, *perhaps*, is given office and residence both, and duly labelled "physician and surgeon."

We deem it a duty we owe the profession of the northwest, that they should be put on their guard against this ingenious swindle. It is due to Prof. Gunn to state that he has not instigated the present notice. His office is at Rush Medical College, and physicians and patients should "govern themselves accordingly."

What the present editorial writer has suffered from a somewhat similar confusion of names need not here be put down. He has at least the consolation that some of his "short comings" have been set down, both by the public and the Recording Angel, to the account of "*the other man.*"

Bowels.

Some of our correspondents wish to know whether, as the newspapers report, a certain irregular practitioner of this city, did, in point of fact, recently, in operating for strangulated hernia in a woman, remove four feet and some odd inches of intestine, with recovery of the patient without any unpleasant symptoms.

The thing is possible. Over thirty years ago the writer was present at an operation of the kind, when some eighteen inches of sphacelated intestine were removed, an artificial anus first established, and the continuity of the intestine subsequently established by a secondary procedure. Many similar cases, and some of a still more extraordinary character, are of record.

In the newspaper case in question there are several elements of improbability. So large a hernial protrusion, in a *woman*, unless of the umbilical variety, is exceedingly unlikely, and "the identical gut" being in a bottle at the operator's office, does not materially enhance the value of

his assertion of where it came from. While belief is in suspense, we have arising in memory an alleged fracture of a patella into six pieces, which was cured in a brief period under treatment, one principal feature of which was a double inclined plane.

Carbolic Acid.

We are agreeable impressed by the statement of a correspondent of one of our homœopathic exchanges, that there has been a "proving" of this important substance by its internal exhibition. "Two hundred and eighty-four symptoms have been elicited by the five provers, and conveniently arranged for reference." A pamphlet has been published on the subject, which can be obtained at Keen & Cooke's. The correspondent well remarks that: "The results attained should be an incentive to more thorough and extended provings of the drug."

We think it should. Meanwhile will this Lord help us?

Discreditable.

Among the ablest of our exchanges is the *Richmond & Louisville Medical and Surgical Journal*, edited by Prof. E. S. Gaillard, M.D., one of the most industrious students, accomplished and versatile of writers, connected with the profession. It seems that in the course of his usual work upon the *Journal*, he had occasion to review a production by one Bell, who we believe is connected with some college or school south of the Ohio river. This review contained nothing but what was in every way legitimate and proper in journalistic criticism, whatever discrepancy of view might be indulged as to the subject matter. But this Bell took the thing in the highest dudgeon. If ever mellifluous in expression, we can assure him that he has broken into a harshness and dissonance which augurs that he has been *cracked* to utter noise *et preterea nihil*. Although we do not know him from Adam (after the fall), and never heard of him save in the present half-Thersites, half-Billingsate tones,

nevertheless, from the depths of the kindness which notably warms the editorial heart, we urge upon him, for his own well-being, that he betake himself incontinently to silence, or to some seven-times heated furnace of discipline, where he may repair damages, and no longer air his discreditable talk to the immediate danger of all tympani. Let us have peace!

Extracts from the Medical Press.

We copy notices, from several reliable sources, of E. Fougera's preparation of Cod Liver Oil, believing it worthy of notice; also call attention to his advertisement in our columns:

Medical Gazette of New York City, March 21, 1868.

"The advantages claimed for Mr. E. Fougera's Cod Liver Oil, are that by reason of the addition of Iodine, Bromine, and Phosphorus, it is more efficacious, and at the same time the stomach need not be disordered by an excessive amount of oil administered. This oil was given to about eighty patients in the out-door department of Bellevue Hospital, about thirty of whom were children, the remainder belonging chiefly to the department of chest diseases. The opinion of the physicians using it are nearly unanimous to this effect: That the oil is of a decided medicinal value; that, compared with ordinary cod liver oil, it appears to take effect more rapidly; and that it obviates the very common necessity of adding extemporaneously to the oil, medicines containing iodine or iron, particularly to the syrup of the iodide of iron." L. M. Yale, M. D., Editor.

St. Louis Medical Reporter, April 1, 1867, *St. Louis, Mo.*

"We have, personally, used Mr. Fougera's Compound Iodinized Cod Liver Oil, and can, from experience, pronounce it one of the best articles of the kind now in use, and trust it will receive that attention from the profession which it so deservedly merits. His other preparations stand high, both for excellence and purity.

J. S. B. Alleyne, M. D., C. F. Potter, M. D., Editors.

OBITUARY.

DIED.—F. O. Earle, M.D., late of this city, died at Rye, N. Y., on the 18th ult.

Dr. Earle was a gentleman of marked ability and fine professional attainments. He had devoted himself especially to the mechanical treatment of deformities of the spine, etc. The cause of his death was Phthisis Pulmonalis.

THE

CHICAGO MEDICAL JOURNAL.

VOL. XXVI.—AUGUST 15, 1869.—No. 16.

TRANSLATIONS.

The Intimate Structure of the Axis-Cylinder and of Nerve-Cells.

BY DOCTOR GRANDRY, (OF LIEGE).

Preliminary Remarks.

The history of the nervous system has been made the object of numerous researches, of late years; but the greater part of the works have treated rather of the relative dispositions of the different nerve-elements in the centres, and of their different modes of termination, than of the intimate structure of the fundamental elements. Remak, however, since the discovery of the axis-cylinder, had already pointed out the longitudinal striation of this element, a striation which he believed to exist at the periphery. The use of re-agents acting upon the nerve-elements, either in an especial manner or by preserving them in a state of integrity more or less perfect, has permitted the unveiling of a structure peculiar to the fundamental elements of the nervous system.

M. Shultze,* by making use of iodo-serum, of the cephalo-rachidian liquid, of the bichromate of potassa in solution in water (from ½ to 1 per cent.), of chromic acid (from 1-40 to 1-20 per cent.), of hyperosmic acid (from ½ to 1 per cent.), has succeeded in demonstrating that a great number of very fine fibrillæ are found in the interior of the nerve-cells of the electric lobes of the torpedo, of the spinal cord and of the cortical substance of the cerebrum and cerebellum. The fibrillæ spread themselves without regular order in the interior of the cells, but this author has not been able to discover their mode of termination in the nerve-cell. He has always seen them losing themselves in the granular substance, but never in the nucleus. The fibrillæ are very fine; some of them, however, attain the size of 0.0005^{mm}.

The prolongations of the cells are thus seen formed by fibrillæ separated from each other by interposed granular matter. It is possible, especially in the prolongations of the cells, to isolate the fibrillæ by maceration in the solution of bichromate of potassa. According to M. Shultze, the axis-cylinder should have the same composition as the prolongation, and the longitudinal striation already determined by Remak would appear not only in the periphery but throughout the entire thickness of the axis-cylinder. M. Schultze concludes the axis-cylinder and the nerve-cells can not be considered as the ultimate elements of the nervous system, but that these elements are themselves formed from more minute elements, primitive nerve-fibrillæ connected together by an intermediate granular substance.

Other authors had already indicated the existence of fibrillæ in nerve-cells, Arnold and Courvoisier, especially, in the ganglion-cells of the sympathetic nerve of the frog.

Fromman,† by the use of very slightly diluted albumen, discovered fibrillæ in the interior of the nerve-cells of the anterior cornua of the spinal cord of the ox; but according

* Discours Académique, Bonn., Aout, 1868.

† Virchow's Archiv., t. XXXI.

to this author, contrary to the opinion of Max Schultze, the fibrillæ should have intimate connections with the nuclei and the nucleoli. The same author, using nitrate of silver as a medium of impregnations, arrived at the following results: "In the greater number of cases the axis-cylinder, whatever may be its volume, presents a transverse striation; sometimes a longitudinal striation is recognized. The nerve-cells, treated in the same manner, are exhibited with a black nucleolus, a colorless nucleus, and the body of the cell colored; upon the prolongations, by the use of albumen, the longitudinal striæ already referred to may be discovered."

The results which I shall exhibit correspond perfectly with those of Fromman, as to the axis-cylinder, but I arrive at very different conclusions as to the re-actions presented by the nerve-cells. This difference of opinion being probably occasioned by the different methods employed, I shall describe in detail the manner in which I proceeded in my investigations. Fromman, moreover, in his work does not specify exactly in every point his mode of procedure.

MEDIA OF STUDY.

My investigations have been made upon the ganglion of Gasser and the spinal cord, the cerebrum and the cerebellum of the ox, the great sympathetic and sciatic nerve of the frog. M. Legros, who has repeated my investigations, in the laboratory of the Faculty of Medicine, Paris, arrived at the same results as I, experimenting upon the same organs in the rabbit.

The organs have invariably been removed as soon as possible after death (on the average half an hour after), so that they were still living, or that at least they might be supposed not to have undergone any sensible cadaveric alteration.

This circumstance is indispensable; the same results cannot be attained with the spinal cords of animals dead more than six hours.

As soon as removed the organs were plunged into a solution of crystallized nitrate of silver of 1 to 400, after having previously been cut into fragments of 1 to 1½ centimetres. This accomplished, I placed them in a receptacle excluded from the light, and at the ordinary temperature, during about five days; then I exposed them to the light during two or three days, leaving them in the silver solution in which they were macerating. This period of action of the re-agent and of light is in general sufficient, but the results appeared to be better if they were permitted to act a longer time; some of my most beautiful preparations have been obtained after fifteen days of the action of the nitrate of silver in darkness and about the same period of exposure to the light.

I should remark that these results were obtained by exposing the objcts to a low temperature, but that in summer the decomposition of the elements occurs on the fourth day. The preparations obtained after fifteen days of maceration were very beautiful at first, but at the end of three or four months they were completely altered.

The silver solution which has succeeded best is that of one four-hundredth. More concentrated solutions gave less satisfactory results. Fromman employed a solution of one six-hundredth for the centres, and one three-hundredth for the peripheral nerves.

The quality of the light has great influence; it is much preferable to use very intense light; it gives much more beautiful results, after a relatively brief period of action, than a feebler light acting for a longer time. In the sunlight sometimes less than half an hour is sufficient to render apparent the re-action in the axis-cylinders.

The action of light is perceptible only upon fragments; hence it follows that this portion only can be used for study; however, the rest is not lost, because the nitrate of silver acts to the depth of two or three millimetres, so that by making sections perpendicular to the surface, and exposing them to the light, a new series of preparations sufficient for the study of the axis-cylinder may be obtained.

In order to make the preparation, it is sufficient to remove a portion of the part which it is desired to examine, by the aid of scissors, or by scraping the surface with the back of a scalpel; the particles thus obtained should be placed upon the slide in a drop of glycerine, either pure or mingled with a little acetic acid, and distended as much as possible.

Instead of making soft preparations, alcohol may be used in order to harden them, and thin slices made and placed in Canada Balsam; the same result may be obtained thus as by proceeding in the manner previously described.

It is absolutely indispensable to follow exactly the process which I have just described in order to obtain, with any degree of certainty, the results detailed above. Failure in the re-actions has sometimes happened to me, but this was always due to the fact that I did not follow vigorously this mode of procedure.

THE AXIS-CYLINDER.

The axis-cylinder should be studied under two conditions: 1st. When it is free, not included in the interior of a fibre, and consequently in immediate contact with the re-agent; 2d. Included in the interior of a fibre, and enveloped by the cell-less sheathe and the cord. I shall commence by studying it in the free state.

The organ most suitable for this investigation is the spinal cord, although it may be as readily made in the ganglion of Gasser, but this latter is better adapted to its investigation in the complete fibre.

The organ having been prepared as I have already described, it will be seen immediately, even when slightly magnified, that the principal and characteristic re-action of the axis-cylinder, whatever may be its volume, is a very marked and very regular transversal striation, similar to that of striated muscles. Throughout its entire extent the cylinder presents portions alternately clear and dark, as if the re-agent had attacked one portion of the substance and spared the other.

It will, likewise, at once be seen that the opaque striæ are found in a definite portion, at regular distances, but that these distances as well as the thickness of the striæ themselves vary in different portions.

The thickness of the striæ varies from 0.001^{mm} to 0.005^{mm}; that of the spaces which separate them from 0.001^{mm} to 0.003^{mm} approximately.*

Considered separately, each of the striæ is seen in the form of a line more or less thick, uniformly colored in the finest, more or less granular and less clearly defined in the larger. This last fact is not constant, for frequently the large striæ are found perfectly homogeneous. If, while observing, the focus of the objective be varied, it will be seen, and this is more readily observed in striæ of medium size, that the stripe which had the appearance of a line uniformly colored, becomes clearer at its centre, and is sharply defined by a deeply colored contour which presents a rectangular form with rounded outlines.

The matter interposed between the striæ is ordinarily lightly colored, but much less so than the striæ; sometimes it is altogether colorless; this depends upon the more or less prolonged action of the re-agent and of the light. It is more abundant between the large than between the fine stripes, but it happens, however, that the large stripes are very closely approximated to each other.

The stripes, whatever their thickness, bear the same relation to each other; they have all the same dimensions in a certain extent and are regularly spaced. As to their direction, they are all placed perpendicularly to the axis of the cylinder, when that is rectilinear; when it is curved, if the curve is slight, the curves radiate from the centre, without changing their form; but in the case of a sharp curve, they change their form, and from rectangular they become triangular, the summits of the triangles being directed to the centre of the curvature.

---

*The spaces between the striæ of the muscles are from 0.0009^{mm} to 0.002^{mm}.

The stripes vary in thickness. It might be supposed that the finest would be found in the smallest axis-cylinders and *vice versa*. It is not so, however. No relation exists between the thickness of the stripes and the volume of the cylinder, for the finest stripes are sometimes found in the largest cylinders.

If a cylinder be examined over a great extent, it will be seen that while the stripes havethes ame thickness, this, likewise, is variable. In this latter case we may find an insensible transition; but most frequently it is abrupt, and then there is found between the two kinds of stripes a deeply colored space, larger than the largest stripes.

There are frequently found upon the same cylinder several of these deeply colored spaces which separate groups of stripes either of the same or of different thickness. All that I have just described is very manifest in cylinders well stained, but it frequently happens that the action of the reagent is too strong or too feeble. In case the action be too strong, the stripes are sometimes seen indistinctly, but ordinarily the entire cylinder presents a uniform deep brown color. When the re-action has been too feeble the stripes are granular, punctuated; but it frequently happens that stripes are found clearly marked from space to space. Sometimes the only effect obtained consists in the presence of blackish granulations, disseminated irregularly upon the cylinder.

Such are the characteristics presented by the axis-cylinder when placed, still living, in a solution of nitrate of silver, and subsequently exposed to the action of light.

Besides the transverse, Fromman speaks of longitudinal stripes, but he does not designate the conditions under which these were recognized. I, also, have detected them, but in cords which had been plunged into nitrate of silver, not at the ordinary temperature, but had been, in the meantime, submitted to a temperature below zero. These longitudinal stripes, although quite plainly visible, are much less marked than the transverse.

I have likewise detected the transverse stripes by my process, though rarely. I have even seen, at times, the axis-cylinder, and especially the prolongations of the cells, presenting the two orders of stripes simultaneously, so that the entire surface presented a well-marked check.

The preceding remarks apply to the axis-cylinder completely isolated. Let us now see how it will behave in the interior of a complete fibre, when it is placed under the same conditions.

If an isolated cylinder be traced into the interior of a fibre, it will be seen that the stripes exist, not only upon the denuded part but likewise upon that which is enveloped by the acellular sheathe and the cord, and that, over a certain extent they are marked, as well marked then as upon the outside of the fibre; if the cylinder be traced farther the stripes will soon be seen to become less marked, dotted, and then to be no longer manifest. The action of the re-agent is only manifest near the points where the axis-cylinder becomes free, and diminsshes in intensity in proportion as it (the axis-cylinder) penetrates into the interior of the fibre.

This is due, probably, to the fact that the nitrate of silver has penetrated to a certain depth by gradual imbibition, and that this imbibition not being possible farther through the acellular sheathe and the cord, the re-agent can no longer act.

It has been already observed that all the stripes are parallel and separated from each other by a matter upon which the nitrate of silver acts feebly.

What is the effect of compression upon this condition? The compression may be vertical, either accompanied by lateral movements or not. Simple vertical compression has no effect upon the finest stripes; the largest expand as well as do the spaces which separate them. If pressure with lateral motion be brought to bear upon the stripes of medium size, well tinted, and especially upon cylinders not very voluminous, sometimes one and sometimes several

stripes will frequently be seen to deviate from the common direction. I have seen stripes displaced singly, without change of form, and assume positions relatively oblique to the others, and even to be placed perpendicular to them, that is, in the direction of the axis-cylinder, just as if this latter were formed of resistant discs separated by a softer substance, some of which might be pressed down obliquely or longitudinally. By the same means it happens, frequently that nearly all the stripes may deviate irregularly from their normal position, in every direction, these varieties of position preserving no relation to the curvature of the cylinder.

The partial rupture of the cylinders may also be effected; and then it will be seen that this occurs in the intervals between the stripes, these latter remaining perfectly intact.

Whatever may be the degree of compression employed, it is very difficult to destroy the stripes, even when they are granular. The effect of the pressure is manifested upon the interposed matter which is much less resistant than the stripes.

Besides the displacement of the stripes, their complete isolation may be effected. In order to accomplish this, I used preparations which had remained a considerable time in glycerine, and applied to the object strong pressure with lateral movements. To reach the same end, it is as well to use fragments of organs macerated several weeks in the silver solution after exposure to the action of light, and to proceed as above in making the preparation with glycerine. By proceeding thus, the stripes may be isolated with facility, and will be seen to present the same characteristics as when they are re-united; generally it is difficult to free them completely from the interposed matter of which a very small quantity remains adherent.

From the facts thus set forth it may be concluded:

1st. That nitrate of silver has a special action upon certain portions of the axis-cylinder, and affect certain others but feebly.

2d. The axis-cylinder is composed of two substances differing by their chemical and physical properties.

3d. These two substances are not mingled, but completely isolated, and present an arrangement regular by relation to each other.

4th. The axis-cylinder is formed of superposed discs separated from each other by a substance which has not the same properties as the discs themselves.

5th. The axis-cylinder contained within the interior of a complete fibre, offers absolutely the same characteristics as the isolated cylinder, in so far as the re-agent can act upon the cylinder itself.

In the examining the axis-cylinder striped transversely, the resemblance which it presents to striated muscular fibre is striking. The characteristics common to muscles and nerves are now much more clearly defined, since M. Schultze has isolated the longitudinal fibrillæ. And here is presented the same discussion as in reference to muscles, that is to say whether the discs or the fibrillæ constitute the ultimate element of the axis-cylinder. I should remark, however, that the axis-cylinder does not behave as do muscles under polarized light. New researches ought still to be established in order to determine rigorously the fundamental element of the axis-cylinder.

NERVE-CELLS AND THEIR PROLONGATIONS.

Before commencing the exposition of my investigations of nerve-cells, I deem it useful to recall, in a few words, the preparation to which the object must be submitted, because it is especially in this particular that my results disagree with those of Fromman, which disagreement I attribute to the difference in the conditions in which we were placed.

The organs were taken as *much alive* as possible, plunged for a certain time into a solution of nitrate of silver, then exposed to the light; upon nerve-cells it is important to permit light to act for a long time, because its action upon them is much weaker than upon the axis-cylinders.

The organ upon which the best results are obtained is the spinal cord (cervical region), and it should also be stated that the observations which follow were made principally upon the cells of the anterior cornua.

Fromman, acting with nitrate of silver upon congealed cords, found the bodies of the cells uniformly colored brown, the nucleus remaining colorless; the prolongations presenting longitudinal, but not transverse stripes.

If the organ be prepared as I have indicated, it will be perceived that, as in the case of the axis-cylinder, the action of the nitrate of silver occasions a very decided striation of the body of the cell and of its prolongations; parts are seen alternately clear and dark.

The striæ vary in thickness from 0.001 mm. to 0.005 mm.

The finest stripes are seen to be completely homogeneous, of a brown color; the largest are generally dotted, granular, as though formed of blackish granulations aggregated together. Between the striæ is found a substance less tinted, sometimes altogether colorless. A cell may present only striæ of the same thickness, but frequently upon the same cell, as upon the axis cylinder, are found striæ of variable thickness. The cells present, likewise, spaces deeply colored, larger than the ordinary striæ, and are thus divided into two or three segments with stripes of the same or different thickness. As to the direction of the stripes no rule can be given. They are all parallel; the nucleus has no influence upon them; they pass above it.

The cells are not always attacked by the re-agent over their whole surface; then, in this case, the cell is seen transversed, so to speak, cut into two by a colored plane which terminates at the surface by a stripe.

By placing myself under the conditions indicated by Fromman I have, as has this author, seen the body of the cell colored uniformly brown, and the nucleus remaining intact; at the same time I have recognized the longitudinal stripes upon the prolongations, but my observations did

not permit me to decide upon their mode of termination in the interior of the cell.

The prolongation of the cells present a transverse striation, in all respects similar to that of the axis-cylinder; as to the thickness of the stripes, it corresponds to that of the stripes of the segment of the cell from which they originate. This is seen in the entire cells, and especially in the prolongations which, torn off, have dragged with them parts of the cell.

If a prolongation be curved around the cell, the striation is not perceptible, but if such movements be imparted to the preparation as to render it rectilinear, immediately the stripes are exhibited very clearly defined. The prolongation becoming re-curved the striation again disappears.

If the nerve cells be compressed, an enlargement of the large stripes is effected, the finer ones undergoing no change. Compression associated with lateral movements produces no isolation of the stripes as in the case of the axis-cylinder; the only effect which can be obtained is to render the stripes sinuous, although leaving them parallel; it should be observed, however, that the stripes can only be destroyed with great difficulty.

Besides the transverse striation the double striation can be detected in the nerve-cells as in the axis-cylinder; in this case I have observed no relation of the longitudinal stripes with the nucleus.

The nerve-cells in which I have clearly determined the striation are those of the ganglion of Gasser; of the anterior cornua of the spinal cord, and of the floor of the fourth ventricle.

From these facts it may be concluded, that

1st. Two substances differing by their properties exist in the body of the cell.

2d. These two substances appear to be chemically isolated.

3d. There is, perhaps, an arrangement in discs, as in the axis-cylinder; but the only fact in evidence is the existence, in certain cases, of a colored plane cutting the cell entirely.

4th. The axis-cylinder and the nerve-cells exhibit the same characteristics when they are submitted, under certain conditions, to the action of nitrate of silver

In consequence of the reactions produced by nitrate of silver upon the axis-cylinder and nerve-cells, we may hope to elucidate the questions of the connective tissue and of the nerve-substance in the posterior cornua of the spinal cord and elsewhere. The investigations which constitute the subject of this memoir were conducted in the laboratory of the Faculty of Medécine of Liege. I must here express my gratitude to Professor Schwann, for the kind feeling which he has manifested toward me in guiding me in my labors.

The work was presented to the Academy of Sciences of Belgium, and we subjoin the conclusions of Professor Schwann.*

"The work of M. Grandry concerns the most important elementary parts of the body. The discussions which they have originated will doubtless revolve around the question whether the striæ seen in the axis-cylinder and the nerve cells, after the use of nitrate of silver upon these organs, still alive, pre-exist before the re-agent, or whether they are artificial products.

"It appears to me difficult to admit that formations so regular, as the stripes in question, *could* be obtained artificially, if there was not already in the living organ a corresponding arrangement. It is not, however, necessary to admit the discontinuity of the discs. There is, perhaps, a homogeneous substance in which are deposited molecules of another sort susceptible to the action of nitrate of silver. These molecules would impregnate certain layers, hardening them, and would leave other layers free. W. H.

---

* *Bulletin de l'Academie des Sciences Belgique.* 37th annee, 2d Serie, XXV, p. 287.

SOCIETY REPORTS.

Chicago Medical Society.

FRIDAY EVENING, July 9, 1869.

Regular meeting Chicago Medical Society, President Bogue in the chair. The election of new members being in order, Drs. Wm. A. Barstow, H. Hooper, H. Hurd and Charles Bendike were unanimously elected.

Report of Committees: none being ready, the meeting then proceeded with the discussion: "Is Hydrophobia amenable to treatment?" Dr. Paoli opened by relating the interest it had, not only to people but to the profession itself. The disease, although it had been much observed, was still in obscurity, yet every effort was made to treat it conscientiously. The death of Mr. Goodwille, from hydrophobia, had been taken up by all the Chicago papers and highly colored modes of treatment were admitted by them. The New York *Medical Gazette* had reprinted the report from the Chicago papers and commented thereon freely, speaking of hydrophobia as incurable, etc., and the treatment adopted as inhuman. Dr. Paoli took great pains to examine into the case and found that it was partly right and wrong. The steam-bath was used in Goodwille's case up to 135 deg., but hot water had not been used. Mr. Goodwille, who was very fond of dogs, picked up the one that bit him, whom he suspected of being mad, but did not notice any effects until two months afterwards. It was not true that the patient was immersed by force. It was also untrue that there was any barking sound from his throat. He was rational the whole time, and when he felt a convulsion coming on he warned his family to keep away from him. It was necessary to learn of the dog's disease first. That hydrophobia is very rare was shown by statistics, there being only 25 deaths in 36,000,000 of people. It would be easy to study the case if all who were reported to have died of it were, really, the victims of that disease. If it was more recognizable in dogs there was little doubt of the suppression of the disease. The first symptom in the dog was its sullen and melancholy appearance, and its illusive biting at imaginary objects. In the dog there were similar smyptoms to those exhibited in man. As the symptoms increased the dog appeared thirsty, but did not drink, only snapping at the water. He was in a paralytic state. In the human being there was no snapping, yet he was in a melancholy state before the symptoms commenced. The skin was very sensitive, and a slight draught would cause convulsions. In the dog there was precisely an opposite symptom. The man was rational, the dog was furious. The man died asphyxiated, the dog paralytic. It would be interesting to examine the subject and mention the various modes of treatment. It must be admitted there was no remedy, but there were preventives. The absorption of this

poison could be stopped. Constitution has something to do with taking the disease, and a great many that were bitten by dogs that were mad recovered. Amputation was recommended, but that was barbarous. He suggested the application of the hot iron. A Russian physician discovered, many years ago, under the tongue of a victim, a small vescicle, and said if this could be removed the patient would recover. This he doubted partially. The physician qualified his statement by saying if, before the 22d day, these vescicles could be removed there was no fear of fatal consequences. There had not been one remedy, external or internal, successful. Bleeding, mercury, arsenic, iron, gold, bromine, silver, and sulphur preparations had been tried, and all failed. The leaves of the Guaco of South America had proved unavailing. A French physician suggested cutting out the wound. If remedies could be immediately applied the patient could be saved. A turnquet had been used, but it only delayed death. Opium and chloroform had been employed. Beneficial effect can then only be expected when the public is made to know the symptoms of rabies in a dog.

Dr. Smith thought, though the question was the treatment of the disease, yet it was necessary to gain some knowledge of its origin. Many physicians, himself included, thought it was only a modified form of tetanus, and not a disease of special contagion. He had made inoculution from the saliva from the mouth of a mad dog, on seven dogs, a horse and a cow, and no results followed, as they invariably did in all cases of contagion, as small pox, syphilis, and others. He had seen a case of furious tetanus produced by an almost imperceptible wound by a pair of scissors falling on the patient's toe, the symptoms coming only on the seventh day. The man refused water and died with all the symptoms of what was called hydrophobia. He thought special observations should be made. He had lived in the city for fourteen years, and had been called to attend diseases similar to hydrophobia, and found them not that disease, and never had seen one case. Barking was a symptom which occurred in inflammation of the cerebellum. He recently attended an epileptic patient who barked like a dog. If that occurred in chorea, why not in any other form of inflammation of the cerebellum. He believed that a bite by a diseased dog might cause something more than tetanus, and did not like to be understood that hydrophobia was nothing more than tetanus, but that nothing special was attached to it, and, in his opinion, it was not a special disease. He had had an interesting case a year ago, in the family of a physician in the city, where a lady had been bitten by a dog. On inspection, the dog certainly evinced symptoms of hydrophobia, and died the next evening. He had found, in his post mortem examination, every symptom generally given by doctors. The lady, however, had exhibited no symptoms, and was now living and in general health. She was treated with bromide of potassium, and nothing resulted. He objected exceedingly to the poisoning of dogs on the streets, which demoralized the police and the children who saw them die; and was it safe to put in the hands of policemen, political appointees, means enough to poison two or three thousand people? The health of the city was injured by having dead dogs about it, and they

were at liberty to die anywhere, and frequently died in annoying places He had seen malignant carbuncle spread by the flies and insects that preyed on these dead animals. If dogs must be killed, other ways and means might be employed, some of which he recommended.

Dr. Danforth said the idea of the vescicle was exploded. If one was there it had no connection with the disease.

Dr. Loverin said the disease had received its name from one of its symptoms, a fear of water. The dog, fox and wolf were capable of producing the disease, and it was popularly believed that they inoculated victims by their saliva. Hydrophobia had many symptoms in common with tetanus, but the fear of water was peculiar to itself. In tetanus we have no fear of water. A prophylactic measure immediately after the bite, was incision of the wound, but the question arose, how long after the bite would the excision be useful? Many eminent men believed that excision before suppuration took place was safe, and was to be recommended. After the symptoms were well represented no known method could restore the patient. He had never seen a case of hydrophobia, but believed there was such a disease.

The symptoms of madness in dogs had been described very well by the gentleman who first spoke. When a dog was rabid he had a musical howl.

Dr. Davis considered the symptoms purely nervous, resulting from direct irritation of the nerve and spinal centres, medulla oblongata, etc. Cases of hydrophobia are very rare, and literature is made up of illy-reported newspaper items, and very unreliable. A writer may talk about it and may never nave seen a case. Medicines must be sedative, and no heroic treatment necessary, and he would never advocate remedies which would kill a well person. Similar causes we meet with of an irritating nature to the nerve-centres, controlling respiration, circulation, in menigitis, cerebro-spinalis epidemica. No harsh means in the treatment should ever be employed. Belladonna and bromides, alternately, with full doses of soda sulphites. Permanganate of potassa to counteract animal poison may be given, as all cases prove fatal any how, but there was an error in trying every thing. and nothing effectual, The dog must be diagnosed to truly have the disease before incision is practiced, but where it results in mutilation no one would feel justified in attempting it.

On motion, society adjourned.

HIRAM WANZER, *Secretary.*

HOSPITAL REPORTS.

County Hospital Reports.

A few notes made at the surgical cliniques during the present year, will convey an idea of the importance of the hospital as a school in operative surgery.

Jan. 5.—1. Hey's amputation of both feet. Case of *frost-bite.* Recovery with good serviceable stumps. 2. Amputation of all of the toes of both feet behind the heads of the metatarsal bones. Recovery with good stumps.

Jan. 12.—Case presenting the following history: Left foot frozen one year ago. Amputation through the base of the metatarsal bones. Flaps sloughed and never entirely cicatrized. On admission to the hospital a large ulcer existed upon the front of the stump, extending on one side back to the ankle. The whole stump was swollen, indurated, and in a condition which rendered impossible an attempt to save any portion of the foot. Amputation of the lower third of the leg was performed by the circular method. Recovery rapid, with a beautiful round stump. The bones of the whole tarsus were found in a state of incipient caries with exostosis and caries of the bone stump of the old operation.

Jan. 16.—Amputation of frost-bitten toes.

Jan. 25.—Lithotomy. Case of boy aged five years. Recovery.

Jan. 29—Amputation of frost-bitten toes.

Feb. 2.—Periosteal abscess at mastoid process, punctured. 2. Circumscribed peritoneal abscess. Case chronic sinus, with opening a little below umbilicus leading downward.

Feb. 5.—Operation for cnronic hydrocele. The scrotal sack laid widely open. Evacuation of half a pint of fluid. Cavity plugged with lint saturated with a solution of carbolic acid in linseed oil. Cured.

Feb. 9.—1. A rare affection of the mouth. Case of papillary tumor upon inner surface of cheek, apparently like macerated epithelium in an elevated patch of slow growth, gradually spreading, giving no inconvenience. Advice, to let it alone. 2. Dressing of fractures. Plaster-of-Paris splint applied. Case of compound fracture of tibia.

Feb. 11.—Perineal section. Case presenting the following history: Gonorrhœa five years ago, followed by stricture, which has been practiced upon three several times by gradual dilation. When admitted to hospital there was retention of urine. A small gum catheter was introduced, after giving chloroform; a stricture was found in the bulbous portion of the urethra, which was ruptured with a Holt's dilator. In the membranous portion there was a close stricture, admitting only a No. 4 steel sound. All of the urethra posterior to this was rough and disorganized. For a time dilation was tried, but at the end of about four weeks there had been no progress. The

urethra was opened freely through the perineum, and a No. 10 sound passed into the bladder. The wound healed very kindly. Advised to use the sound once in three or four weeks thereafter.

Feb. 19.—1. Amputation of toes of both feet. Case of frost-bite. Died of pyæmia, March 3d. 2. Amputation of leg. Case of compound Pott's fracture. Recovery.

Feb. 26.—Tenotomy about hip and knee .Case of inflammation of hip joint. Improved.

March 2.—Opening subfascial abscess of thigh.

March 5.—1. Amputation of middle finger. Case of traumatic gangrene. Six days ago a car wheel passed over the hand, fracturing and lacerating the index finger. In three days the little and ring fingers were gangrenous and subject to removal. A useful member preserved in remaining thumb and index. 2. Operation for removal of small subaceous tumor in supercilium.

March 9.—Paracentesis of the scrotum. Case of hydrocele. Two cysts caused by adhesion between the sides of the sack.

March 11.—Perineal section. Case of stricture of the urethra with urinary fistulæ. Decomposed tissues and hæmorrhoids, making operation difficult. Cured.

March 12.—Amputation of leg. Case of caries of ankle joint following Pott's fracture.

March 16.—1. Injection of dilute compound tincture of iodine. Case of chronic hydrocele. Cured (March 9). 2. Amputation of great toe. Case of frost-bite. 3. Amputation of index finger. Case of crushed hand (March 5).

March 19.—1. Case of crushed foot, boy aged thirteen. Toes involved; tissues lacerated; bones fractured. Treatment, whisky and water—conservatives. Recovery. 2. Case of pistol-shot wound. Ball entered opposite crest of ilium, passed downward, backward, and inward. Search fruitless. 3. Case of injured knee, presenting the following history: Man aged thirty-five. Last June a car wheel struck his knee and opened the joint so that two fingers could be laid in it, patella two-thirds enucleated, bruised and ragged; a lacerated wound of the popliteal space as large as the hand. It was decided not to amputate. The patella was removed. Pus burroughed up the thigh. Swelling and pus finally disappeared. Cicatrized well; anchylosis by adhesion; position straight. Discharged from hospital at the expiration of eight months, cured. Returned the same day with rupture of the adhesions at the point of anchylosis, having met with an accident which flexed his leg upon the thigh. Leg placed at rest upon a pillow. Position, partial flexure. He will recover. 4. Removal of epulis from lower jaw.

March 26.—1. Dressing of fractures. 2. Operation for obliteration of varicose veins. Case of ulcer of the leg. Injection of solution of persulphate of iron. Cured.

March 30.—Pistol-shot wound of lumbar region. Bullet removed from a deep fluctuating abscess on side opposite wound of entrance. Large collection of pus (March 19). 2. Free openings in palm of hand to liberate burroughing pus. Case of amputated fingers, March 15 and 16).

April 2.—Burns. Three negroes burnt in jail. Treatment, cabon oil and lint.

April 6.—Railroad injury. Case of boy aged seven years. Fracture of right femur; lacerated wound of right leg; deep lacerated wound of sole of foot; compound cominuted fracture of left leg. Injury at noon. Given a teaspoonful of whisky and six drops of tincture of opium every hour. At three p. m., pale, collapsed features, sleeping. Chloroform administered; ready in four minutes; not profoundly anæsthetized. Circular amputation of the left leg two inches above the knee. Died 11 p. m.

April 9.—1. Compound fracture of leg, complicated with delirium tremens. 2. Epithelial execresence upon lower lip, fourteen years standing. Half inch lip. Base, one inch by five-eighths of an inch. Crumbling off occasionally. Excised.

April 16.—Death from chloroform. Case of caries of ankle joint preparing for amputation. Middle-aged man, anœmic. Chloroform administered with a folded towel in a judicious and skillful manner. One minute after the first inspiration a convulsive movement of the extremities occurred. A few seconds later the chloroform was removed and his head declined. After four or five convulsive inspirations at long intervals, he ceased to breathe. Face livid; pupils dilated; eyes and jaws open. The heart's action was maintained for forty minutes.

May 4.—Operation, trepanning tibia. Case of chronic abscess. Cavity filling with new bone.

May 11.—Case of torticollis, from contraction of old cicatrix of a burn along the base of the lower jaw. Primary operation, division of cicatrux to secure adhesion to the bone.

May 24.—Operation for removal of necrosed bone. Case of gun shot; fracture of femur.

June 4.—Lithotomy. Case of boy aged seven years. Died of peritonitis June 10.

June 8.—Plastic operation. Case of torticollis. Cicatrix removed. (May 11).

June 13.—Operation, removal of carcinoma of the neck. Case of a man aged fifty-nine. The tumor, seventeen years in growing, had reached the size of a cocoa nut, having its origin deep on the right side near the base of the skull. An operation of the greatest difficulty performed with but little use of the knife. First, the common carotid of the affected side was ligated; then a free incision vertically through the integument. The tumor was found to have involved all the structures at the side of the neck. The mass was enucleated as far as possible by lacerating tissues. Reaching the base of the growth, it was found so firmly attached to the base of the skul and transverse processes of the superior cervical vertebræ as to require all

the strength of the operator to wrest it away. The internal jugular was lacerated close to its exit from the fossa. The deluge of blood that followed ceased spontaneously. The patient reacted, but died at the expiration of the second day, with every symptom of compression of the brain. No autopsy.

June 25. Operation for hare-lip. Case admitted with pneumonia. Operation during convalescence. Cured. C. F.

Cook County Hospital.

BY C. FENN, M. D., CHICAGO.

There is no "season" at the County Hospital. The student or practitioner may witness at any time a large number of instructive cases in each of the departments. The attractions are continual, and varied each day by the additions upon the register. The visitor who returns after a few weeks' absense will find almost an entire change has taken place in the occupants of the wards. The crowded condition of the hospital often necessitates the discharge of convalescents before they are fairly able to go, in order to make room for other emergency cases. Some afterward return to the dispensary for a continuance of treatment.

The clinics are held only from the first of October to the first of July; but the same gentlemanly attendants are on duty, and the same diversity and interest attaches to their charge during the remaining months as before. Pathology, of course, presents the highest attraction here, because of facilities of comparison; but, aside from this, pre-eminence cannot be given to any department. All are amply furnished with material for illustration.

The service is divided among the Medical Board, consisting of four attending surgeons, four attending physicians, two consulting surgeons, two consulting physicians, one gynecologist, one ophthalmologist, and one pathologist. The attending physicians and surgeons are each on duty three months of the year. The other members of the Board have no intermission of this term of service.

The following is the organization of attending surgeons: Prof. E. Powell, Dr. R. G. Bogue, Dr. T. D. Fitch, Dr. Charles G. Smith.

Attending Physicians: Prof. J. P. Ross, Prof. Thomas Bevan, Prof. H. A. Johnson, Dr. H. M. Lyman.

Consulting Surgeons: Prof. J. W. Freer, Dr. J. R. Gore.

Consulting Physicians: Prof. W. H. Byford, Dr. R. C. Hamill.

Gynecologist: Dr. H. Webster Jones.

Ophthalmologist: Dr. J. S. Hildreth.

Pathologist: Dr. Henry M. Lyman.

The whole number of patients treated in the hospital, exclusive of the outside dispensary, during the six months ending June 30, 1869, was: Surgical, 173; medical, 312; gynecological, 106; ophthalmological, 41. Total, 632.

EDITORIAL NOTES.

Professional Perspicuity.

In an original communication in the July number of the *Medical Examiner*, upon the subject of tetanus occurs the following passage:

"L. B., a young man aged 22, was out hunting near Calumet; while in the act of loading his gun, or after it was loaded and capped, his dog, a fine, noble looking beast, sprang upon him; in passing his paws to the ground they struck the cock, and the contents were immediately lodged in the fore-arm and the other hand."

Such, it appears, was the source of a case of tetanus, which, the writer kindly informs us, in another place, "is an affection of the excito-motor nerves."

The very ambiguous phraseology of the above quotation suggests three queries, viz:

1st. What was the nature of those "*contents?*"

2d. Of what were they the "*contents?*"

3d. What would be the effect of "lodging them immediately in the forearm and the other hand?"

The most immediate effect appears to have been the decision "to give him the benefit (?) of *council*;" (he was not even allowed the "benefit of a doubt"), and the next was "amputation," of what the writer does not condescend to inform us further than to refer to it as "the operation, which is of no interest here to describe." The next consequence in order appears to have been "tetanus," during which "the opisthotonos which was *permanent* was *at times increased* by violent *clonic spasms* of the same muscles." Paradoxical!

To the administration of "three drops of croton oil" and a "fly blister laid on the whole course of the spinal column" succeeded that of "two grains of sulphate of morphia every hour." The consequence of which seems to have been

that "in the evening of the same day I found the symptoms very much increased in severity." For which result surely neither the patient nor the medicine should be blamed.

Subsequently to this the patient was subjected to the influence of the Calabar bean, which, after repeated administrations, both by the mouth and sub-cutaneously, was continued in the latter form at intervals of "two hours" in doses "of half a grain of sulphate of morphia," and this "after the tetanic spasms had subsided."

Upon the development of "poisonous symptoms" the use of the bean was discontinued, and upon their subsidence "I ordered two grains of morphia by the mouth every three hours." "From that time forward he seemed to get better, but I still continued the use of the bean in one-third grain doses, for two weeks."

The above is a brief review of one of the most remarkable cases in its origin, treaiment and results which we have ever had the good fortune to encounter. It is greatly to be regretted that the author did not permit an inspection of the case by some physicians of the city, or at least given the name and residence of his fearfully afflicted patient in order that the *facts* of a case so remarkable might be generally understood in the professional community.

In the interests of science we hope that the three queries prefixed will be definitely answered.

Earth Closets.

We have been favored by Sanitary Superintendent Ranch with an examination of a model of this new and exceedingly important invention, which he desires to introduce into general use in this city. In no city in the country, except, perhaps, New Orleans, does the subject of the disposition of the excrementitious matter demand more attention than in Chicago; having been rejected by the system as worthless and hurtful. The primary object to be kept in

view, in the consideration of the subject, would seem to be to prevent their return into the animal economy from which they had been ejected. To accomplish this object it is necessary to protect against contamination the air which we breathe and the water which we drink, both of which are continually contaminated, more or less directly, by every mode yet devised for the disposition of human excreta. A secondary, though still vitally important object to be considered is the useful or profitable disposition of these matters, that they may become, instead of a nuisance, a source of wealth, by returning food to the earth that we may draw therefrom increased supplies of food for man.

If this invention will perform what it promises, we believe it will greatly facilltate, if it does not secure the accomplishment of all these objects. It is certainly worth examination by every physician and householder.

Craig Microscope.

Can any body tell us what has become of the individual who advertised the Craig Microscope? We have a letter from one of our subscribers, who somewhat anxiously wishes to know his whereabouts. A publication of our correspondent's letter may be needed. Can the microscope man see it?

Fluid Extracts

Our thanks are due Messrs Chapman & Dunks (see advertisement) for very excellent samples of Fluid Extracts, aconite, cimicifuga, ergot, hyoscyamus and veratrum viride. The efficient qualities of each are preserved with a degree of perfection we have not known surpassed.

BOOKS RECEIVED.

A TREATISE ON THE DISEASES OF THE EYE. By J. Soelberg Wells Professor of Ophthalmology in King's College, London; Ophthalmic Surgeon to King's College Hospital; and Assistant Surgeon to the Royal Ophthalmic Hospital, Moorfields. First American edition, with additions. Illustrated with two hundred and sixteen engravings on wood, and six colored plates: together with selections from the test types of Prof. E. Jaeger and Dr. H. Snellen. Philadelphia: Henry C. Lea, 1869. Cloth, $6.50. Leather, $7.50. W. B. Keen & Cooke, Chicago.

The zeal, industry and success of the ophthalmologists are very great, and prove conclusively the advantage to science of devotion to specialties. While, however, we advance this belief, let it be understood that we are, also, firm in our convictions that years of cultivation of the science of medicine as a whole are necessary as the ground-work of any specialty. Specialism thus founded we commend; specialism which springs immediately from a single root is a sickly plant, and should be rooted out completely. Men who have cultivated and practiced the science of medicine as a whole, and whose tastes lead them into special fields are deserving of all confidence; but the little men who have hatched from a *special* egg are not worthy to be entrusted with any interests whatsoever.

In a work now before us we find ophthalmological science brought down to the standard of the present; and we can but notice that in doing this our author expunges as well as adds. For instance, the old operation of reclination or couching is disposed of in half a page, and is introduced by the following sentence: "I mention this operation to state that, in my opinion, it should be completely abandoned." This is stronger language than Stellwag uses, who says, when speaking of the percentage of bad results: "Hence, at present, depression is almost abandoned."

The section upon astigmatism is comprehensive and clear; it is also very finely illustrated, as is, also, the whole work. The whole of chapter XIII on the anomalies of refraction and accommodations of the eye is, to us, the most satisfactory exposition we have yet had.

The same may be said of the chapter devoted to diseases of the lachrymal apparatus.

In section 12 of chapter 1 there is illustrated an ingenious plastic procedure for the cure of simblepharon This difficulty has, in some of its forms, been a stumbling block to surgeons, and if the conjunction admits of such plastic operations as are here described and illustrated, this unfortunate impediment is overcome.

In short, we heartily commend the book to our brethren; not only those who devote themselved to ophthalmology, but to all; for all should know more about the eye than, we regret to say, too many do.

A MANUAL OF ELEMENTARY CHEMISTRY. THEORETICAL AND PRACTICAL. By George Fownes, Ph. D. From the Tenth revised

and enlarged English edition. With one hundred and ninety-seven illustrations. Edited by ROBERT BRIDGES, M.D., Professor of Chemistry in the Philadelphia College of Pharmacy. In one large and handsome royal 12mo. volume of about 850 closely printed pages: extra cloth, $2.75; leather, $3.25. Philadelphia: Henry C. Lea. Chicago: W. B. Keen & Cooke.

Some years having elapsed since the appearance of the last American edition, and several revisions having been made of the work in England during the interval, it will be found very greatly altered, and enlarged by about one hundred and fifty pages, containing nearly one-half more matter than before. The editors, Mr. Watts and Dr. Bence Jones, have labored sedulously to render it worthy, in all respects, of the very remarkable favor which it has thus far enjoyed, by incorporating in it all the most recent investigations and discoveries, in so far as is compatible with its design as an elementary text-book. While its distinguishing characteristics have been preserved, various portions have been re-written, and especial pains have been taken with the department of Organic chemistry, in which late researches have accumulated so many new facts, and have enabled the subject to be systematized and rendered intelligible in a manner formerly impossible. As only a few months have elapsed since the work thus passed through the hands of the English editors, but little has remained to be done by the American editor. Such additions as seemed advisable have, however, been made, and especial care has been taken to secure, by the closest scrutiny, the the accuracy so essential in a work of this nature.

The amount of matter condensed into this small volume is almost wonderful. It is pre-eminently the text-book for the student and practitioner, and will, of course, achieve a large success and wide popularity.

HOW TO READ CHARACTER: A New Illustrated Hand-Book of Phrenology and Physiognomy, for the use of Students and Examiners; with a Descriptive Chart for marking, and upwards of 170 Engravings. Price. post-paid, in muslin, $1.25; in paper, $1. S. R. Wells, Publisher, 389 Broadway, New York. W. B. Keen & Cooke.

A TREATISE ON THE FUNCTION OF DIGESTION: Its Disorders and their Treatment. By F. W. PAVY, M.D., F. R. S., etc., etc. From the Second London Edition. Pp. 246. Philadelphia; Henry C. Lea. 1869. $3.00. Chicago: W. B. Keen & Cooke.

The author sustains in this brief *resume* his high reputation. His monograph is a model of condensation, yet a perspicuous view of a most important subject. It is aphoristic, yet eminently practical—a worthy companoin to Chamber's excellent treatise.

PAMPHLETS.

BRAITHWAITE'S RETROSPECT OF PRACTICAL MEDICINE AND SURGERY. Part LIX, July, 1869. New York: W. A. TOWNSHEND & ADAMS Publishers. $2.50 a year in advance, postage prepaid. Half-yearly parts, $1.50.

PROCEEDINGS OF THE STATE MEDICAL SOCIETY OF MICHIGAN FOR 1867 AND 1868.

MONTHLY REPORT OF THE DEPARTMENT OF AGRICULTURE for May and June, 1869.

GEORGIA MEDICAL ASSOCIATION. Proceedings and Transactions at the Sessions of 1868 and 1869, with Constitution and By-Laws.

UNANIMOUS REPORT OF SELECT COMMITTEE ON REPRESENTATIVE REFORM. Presented to the Senate of the United States, March 2, 1869, by Hon B. F. WADE, Senator from Ohio. Reprinted and electrotyped by the Minority Representation Society, Chicago, Ill.

Copies of this valuable paper can be obtained by addressing the Secretary of the Society, Sidney Myers, Esq., Chicago. It would be out of place here to express our earnest hope that the important subject of which it treats may be thoroughly studied by the Medical Profession, who should be first and foremost in every grand reform.

PRESCRIPTION AND CLINIC RECORD. By EDOUARD SEGUIN, M.D. Published by W. Wood, 61 Walker Street, New York. Fifth edition, Price 50 cts.

A convenient pocket arrangement whereby duplicates of prescriptions may be readily kept, as also brief notes of each case. An introductory chapter affords some valuable hints.

TREATMENT OF LACHRYMAL AFFECTIONS. By PROF. ARLT, of the University of Vienna. Translated by JOHN F. WEIGHTMAN, M.D. Philadelphia. Lindsay & Blakiston, 1869. Pp. 80. With Plates. A very useful monograph.

STRUCTURAL LESIONS OF THE SKIN: Their Pathology and Treatment, Illustrated. By HOWARD DAMON, A.M., M.D., Fellow of the Mass. Med. Soc., etc., etc. Philadelphia, J. B. Lippincott & Co. 1869. W. B. Keen & Cooke, Chicago.

ANNUAL ANNOUNCEMENTS, Bellevue Hospital Medical College, 1869-70; Med. Dept. University of Buffalo; Chicago Medical College; Missouri Medical College.

SECOND ANNUAL REPORT OF THE BRAINARD FREE DISPENSARY OF THE CITY OF CHICAGO.

DEMANDS OF THE HOUR UPON THE MEDICAL STUDENT. Valedictory Address, by L. M. WHITING, M.D., Charity Hospital Med. College, Cleveland, Ohio.

THE RELATIONS AND RECIPROCAL OBLIGATIONS BETWEEN THE MEDICAL PROFESSION AND THE EDUCATED AND CULTIVATED CLASSES. By HENRY S. HEWITT, M.D. Being an Oration before the Alumni Association of the Medical Department of the University of New York.

CHICAGO

WHOLESALE PRICE-CURRENT

Of Drugs, Medicines, Chemicals, Etc.

CORRECTED BY

E. P. DWYER & Co.

Acid, Acetic. by carboy	per lb.	$0 80
Less than carboy	"	25
Benzoic	per oz.	40
Carbolic, cryst	per lb.	1 75
do solution	"	60
Citric, by keg, 112 lbs	"	1 12
Less than keg	"	1 20
Fluoric	"	3 00
Gallic, bottle included	per oz.	35
Muriatic, by carboy	per lb	6
Less than carboy	"	8
Nitric, 41 per cent., by carboy	"	18
Less than carboy	"	20
Nitric 38 per cent. by carboy	"	16
Less than carboy	"	20
Oxalic	"	36
Sulphuric, by carboy	"	4¼
Less than carboy	"	7
Tartaric, powdered, P. & W. by 50 lb. case	"	80
Less than case	"	85
Aloes, Cape	"	25
Cape, powdered	"	36
Barbadoes	"	60
Socotrine	"	1 05
Socotrine, powdered	"	1 20
Ammonia, Carbonate	"	25
Muriate, by bbl	"	17
Less than bbl	"	20
Aqua, 4 F	"	12
do do by carboy	"	10
do 3 F	"	10
do do by carboy	"	8
Bromide	"	2 75
do	per oz.	25
Antimony, powdered, black, pure, by 100 lb case	per lb.	6½
Less than case	"	8
Aniseed, Italian	"	26
Star	"	55
Arnica Flowers	"	28
Arrow Root, American	"	15
Barmuda	"	55
St. Vincent	"	25
Taylor's' in foil, by 12 lb. case	"	50
Less than case	"	55
Arsenic, by keg	"	6
Less than keg	"	10
Balsam Copaiva, pure	"	1 10
Fir	"	55
Fir	per gal.	4 00
Balsam Peru	per lb.	5 50
Tolu	"	1 40
Sulphur	"	50
Barbadoes, Tar True	"	20
Barley, Pearl, by keg	"	9
Less than keg	"	10
Bayberry Bark	"	15
Powdered	"	20
Bay Rum, pure, imported	per gal.	6 25
Commercial	"	4 00
Bismuth, Subnitrate, P. & W.	per lb.	7 50
Bisulphuret Carbon	"	45
Blue Pill, P. &W,	"	85
English	"	1 00
Blue Vitriol, by bbl	"	15
Less than bbl	"	16
Borax, refined, by bbl	"	33
Less than bbl	"	36
Powdered	"	45
Brimstone, by bbl	"	4¾
Less than bbl	"	5½
Bromine, vial included	per oz.	55
Buchu Leaves, long	per lb.	60
Short	"	40
Burgundy Pitch, True	"	16
American	"	12
Calabar, Beans	per oz.	75
Calamus Root	per lb.	25
Bleached, No. 1	"	60
do No. 2	"	40
Calomel, P. & W., bulk	"	1 05
P. & W., bottles	"	1 10
English (genuine)	"	1 50
Camphor Gum, refined	"	95
Canary Seed, by bag	"	10
Less than bag	"	11
Cantharides	"	2 00
Powdered	"	2 15
Capsicum, African, powdered	"	42
Caraway Seed	"	24
Cardamon Seed, Madras	"	4 00
Malabar	"	4 50
Cassia, in Mats	"	80
Buds	"	1 15
Caustic Soda, best brands	"	8¼
Celery Seed	"	70
Cerate Cantharides	"	1 15
Chalk, White, by bbl	"	2¾
Less than bbl	"	4
Crayons	per box	35
Red Fingers	per lb.	8
Prep. Drops	"	9
Precip. English	"	25

Chamomile Flowers, Roman, new	per lb.	50
Chamomile Flowers, German	"	40
Chinoidine, P. & W., oz. rolls	per oz.	20
Chloride of Lime, bycask	per lb.	5
Less than cask	"	7
Chloroform, P. & W	"	1 45
Squibb's	"	3 00
Citrine Ointment, P. & W	"	50
Civette	per oz.	8 00
Cloves	per lb.	44
Powdered	"	60
Cobalt, powdered	"	35
Cochineal, Hond, genuine	"	1 35
L. S	"	1 25
Cocoa, butter	"	1 00
Colchicum Root, English	"	25
Seed	"	25
Collodion	"	1 85
Colocynth Apple	"	70
Powderad	"	75
Columbo Root, American	"	25
Foreign	"	24
Powdered	"	35
Composition Powder, 2 oz. packages	"	45
Concentrated Lye (old style iron case)	per case	8 25
New style paper box	"	6 50
Confection Rose	per lb.	55
Senna	"	55
Copperas, by bbl	"	2¼
Less than bbl	"	3½
Coriander Seed	"	16
Corrosive Sublimate	"	95
Crab Orchard Salts	"	40
Cream Tartar, perfectly pure, powdered, Grocer's	"	30 @ 40
Cubebs, berries	"	38
Powdered	"	40
Cudbear No. 1	"	42
No. 2	"	25
Cumin Seed	"	18
Cuttle Fish Bone	"	35
Dragon's Blood, in Mass	"	1 00
Drug Mills, Swift's, *Ea*	—	15 00
Dover's Powders, P. & W	"	3 20
Elm Bark, select	"	15
Powdered	"	20
Ground	"	18
Emery Grains, all Nos	"	12
Flour, by keg	"	8
Less than keg	"	10
Epsom Salts, by bbl	"	4¾
Less than cbl	"	5½
Ergot	"	1 35
Powdered	"	1 50
Ether Sulphuric	"	70
Washed	"	75
Concentrated	"	85
Acetic	"	90
Chloric	"	1 00
Extract, Belladonna, English	"	4 05
Cannabis Indica, English	per oz.	1 50
Conium, English	per lb.	2 00
Dandelion, English	"	1 90
Hyosciamus, English	"	5 00
Fennel Seed	"	18
Flax Seed	"	7
Ground, by bbl	"	7
Less than bbl	"	7½
Fœnugreek Seed, powdered	"	16
Gambier, or Eerra Japonica, by bale	"	7½
Less than bale	"	10
Gelatine, Coxe's	per doz.	2 50
Pink, French	per lb.	1 60
White	per lb.	65
Gelatine, Cooper's, by 12 lb. boxes	"	90
Less thon 12 lb. box	"	95
Gentian Root	"	20
Powdered	"	25
Ginger Root, Jamaica, bleached	"	35
Jamaica, bloached, powdered	"	40
E. I., powdered, pure	"	26
E. I., Root	"	22
Glauber Salts, by bbl	"	2½
Less than bbl	"	3½
Glue, A., Extract, Cooper's, White	"	55
B. & A., White	"	50
No. 1 Extra Cooper's, White	"	48
No. 1 Sheet	"	25
No. 2 Sheet	"	22
Common	"	18 @ 21
Glycerine, Bowers'	"	80
Heavy, Inodorous	"	45
Price's English	"	1 10
P. & W., No. 1, concentrated	"	45
P. & W., No. 2, concentrated	"	35
Proctor & Gamble's	"	50
Vienna, 1 lb. bottles	"	45
Gum Arabic, 1st select	"	95
2d select	"	70
3d select	"	60
Prime, sorts	"	50
Assafœtida, fair	"	45
Select	"	70
Benzoin	"	1 00
Catechu, true	"	16
Gamboge	"	1 50
Powdered	"	1 60
Guiac	"	55
Powdered	"	65
Euphorbium	"	30
do powdered	"	45
Kino	"	90
Mastic	"	4 50
Myrrh, Turkey	"	60
do powdered	"	70
Sanderach	"	65
Shellac, Campbell's	"	55
Good Native Orange	"	45
Bleached	"	85
Tragacanth, White Flake, No. 1	"	1 75
No. 2	"	1 50
Sorts	"	45
Hemp Seed, by bbl	"	8
Less than bbl	"	7
Hoffman's Anodyne, P. & W	"	60
Insect Powder	"	1 25
Iodine Resublimed, 1 lb. bottles	"	6 75
1 oz. vials	per oz.	48
Ipecac, powdered, pure	per lb.	3 75
Iron, Carb. Precip., P. & W	"	25
Hydrogen, P. & W	"	2 75
Iodide Syrup	"	70
Muriated Tincture	"	44
Pyrophosphate	"	1 50
Isinglass, Amer., (Norwood & Manning's)	"	1 25
Per barrel	"	1 10
Jalap Root, powdered	"	2 20
Juniper Berries, by bag	"	5
Less thrn bag	"	7
Kreosote	"	1 25
Lemon Peel	"	25

Laurel Leaves .....per lb. 12½
Liquorice Extract, Calabria, gen., P. & S ..... " 45
Liquorice Extract, Calabria, gen., Barraco ..... " 45
Root, select..... " 16
Powdered ..... " 20
Sicily ..... " 24
Lobelia Seed..... " 60
Lunar Caustic, Cones Squibb's.per oz. 2 20
Lupuline.....per lb. 1 00
Lycopodium ..... " 85
Mace. ..... " 1 65
Magnesia Carb. 2 oz. papers, Pattison's ..... " 38
4 oz. papers, Pattison's..... " 37
2 do Jenning's..... " 48
4 do do ..... " 44
Calcined ..... " 75
do Jenning's 1 lb. bottles ..... " 1 45
Manganese, black, Oxide..... " 8
Manna, sorts..... " 75
Large Flake..... " 2 40
Small Flake..... " 1 75
Marble Dust.....per bbl. 3 50
Mercurial Ointment, P. & W., ⅓ mercury .....per lb. 70
P. & W., ⅓ mercury..... " 55
Morphine, Sulph., P. & W., vials included.....per oz. 9 25
Moss, Iceland.....per lb. 15
Irish, select, by bbl.. ..... " 10
do No. 1, by bbl..... " 7
Musk, Chinese, oz. cans.....per oz. 1 00
Tonquin, true, in grain..... " 38 00
do do in pod ..... " 16 00
Mustard, Ground Colemau's, g.per lb. 55
In cans, imitation..... " 35
Taylor's in cans..... " 75
do in foil, S. F..... " 80
do in foil, D. S, F..... " 85
Seed, white, English..... " 19
do American..... " 14
Seed, black, English ..... " 18
do American..... " 12
W ld's, 4 and 6 lb. cans ... " 45
Nitrate of Silver, pure.....per oz. 1 33
Nutgalls, Aleppo.....per lb. 44
do do powdered ... " 45
Nutmegs, No. 1.....per lb. 1 45
Nux Vomica..... " 20
do powdered..... " 38
Oil, Almond, swest..... " 95
do bitter, essential..per oz. 1 65
Amber, crude.....per lb. 60
do rectified..... " 1 40
Anise ..... " 4 50
Bergamot, Sanderson's ..... " 7 50
Cassia ..... " 4 00
Caraway ..... " 3 00
Citronelle ..... " 2 75
Cajuput ..... " 2 25
Citronelle, native..... " 2 75
do Winter's..... " 3 25
Cloves..... " 3 20
Cod Liver, Hegeman & Co's.....per doz. 7 50
Cod Liver, Rushton's ..... " 8 00
Cod Liver, bulk, pure .....per gal. 2 35
Copaiba .....per lb. 4 25
Coriander .....per oz. 2 50
Croton, English.....per lb. 3 00
Cubebs, P. and W..... " 4 50
Cumin .....per oz. 65
Ergot ..... " 30
Erigeron .....per lb. 4 00
Fennel .....per lb. 3 00
Hemlock.....per lb. 50
Juniper ..... " 1 40
Juniper Berries.....per oz. 50
Lemon, Opt, Sanderson's..per lb. 4 75
do Grass Winters.....per oz. 55
Lavender, Garden. fine.....per lb. 1 75
Lavender, Opt, Chiris ..... " 4 25
Mace, expressed..... " 3 00
Mustard, essential .....per oz. 2 25
Myrrbane .....per lb. 2 75
Neroli, Chiris .....per oz. 4 75
Nutmegs ..... " 75
Olive, Marseilles, quarts...per doz. 6 75
do do pints..... " 4 00
do Daccosini, quarts... " 6 00
do do pints..... " 3 25
do Bordeaux, quarts... " 14 50
do do pints..... " 8 00
Orange Bitter.....per lb. 7 00
Orange Flowers..... " 5 50
Origanum, pure..... " 1 40
do commercial ..... " 65
Pachouly .....per oz. 5 00
Pennyroyal .....per lb. 3 50
Peppermint, pure..... " 6 26
Rhodium .....per oz. 85
Rosemary ..... " 1 35
Rose Geranium, Chiris..... " 1 25
do Kisaulilik, pure..... " 10 25
do commercial ..... " 5 00
Sassafras .....per lb. 1 15
Savin ..... " 1 75
Spearmint ..... " 6 00
Tansy ..... " 5 50
Wintergreen, pure..... " 4 75
Worniseed ..... " 4 00
Wormwood ..... " 7 00
Opium, Turkey ..... " 12 15
Purney, powdered..... " 17 00
Orange Peel ..... " 14
Ground..... " 18
Orris Root, select..... " 20
Powdered..... " 25
Peruvian Bark, Red Quill, P. and W..... " 1 75
Red Quill, powdered, P. & W..... " 2 05
Peruvian Bark, Rubingosa, powdered..... " 1 00
Yellow Quill..... " 30
do do powdered..... " 40
Pink Root..... " 35
Piperine.....per oz. 1 65
Potassa Bromide.....per lb. 1 50
Acetate ..... " 85
Carb. (Sal. Tartar) ..... " 20
Potash, crude, in casks. No. 1.. " 7¾
Potash, Chlorate, French..... " 75
do English..... " 55
Prussiate ..... " 44
Bichromate..... " 24
Potassium Iodide, Pfizer's ..... " 5 25
A. and B..... " 5 60
Cyanide, fused..... " 80
Plaster Paris, ordinary.....per bbl. 4 50
do do Dentists' ..... " 5 00
Quinine, Sulph., P. and W.....per oz. 2 40
Sulph, Frehch..... " 2 40
Quicksilver .....per lb. 90
Red Precipitate..... " 1 18
Rhubarb Root, E. I., select.... " 3 00
Powdered, select..... " 3 20
English ..... " 2 65
English, powdered ..... " 2 75
Rice Flour, 1 lb. packages ..... " 15
Rochelle Salts, P. and W..... " 50

Rose Leaves, damask	per lb.	2 75
Rosin, pale	"	4 @ 5
Sago, Pearl, by case	"	14
Less than case	"	15
Sarsaparilla, Honduras	"	58
Honduras, ground	"	63
Sassafras bark, by bbl	"	12½
Less than bbl	"	14
Saffron, American	"	2 75
Spanish	"	17 50
do	per oz.	1 20
Salacin	per oz.	55
Saltpetre, crude	per lb.	14
Hudson	"	12½
Pure Crystals (by 100 lb. keg)	"	17
Pure Crystals (less than keg)	"	19
Powdered	"	28
Santonine, P. and W.	per oz.	28
Seidlitz Mixture, P. and W.	per lb.	44
Seneka Root	"	65
Senna, Alexandria, sifted	"	55
do ordinary	"	45
E. I.	"	30
Tinnevelly	"	38
Snuff, Scotch	"	70
Macaboy, rose scented	"	75
Soap, Castile, Mottl'd, genuine, by box	"	17
Castile, white, by box	"	26
Soda, Bicarb., Newcastle, by keg	"	6½
Less than keg	"	8
Sal, (by bbl., 500 lbs)	"	3¼
Less than bbl	"	4
Soda Ash, best brands, in c'ks	"	4
Spermaceti	"	58
Squills, Root	"	15
Strychnia, Crystals, vials included, P. and W.	per oz.	3 35
Powdered	"	3 10
Sugar Lead, white	per lb.	37
Milk, powdered	"	65
Sulphur, Flour, by bbl	"	6
Less than bbl	"	7
Sweet Spirits Nitre, 4 F	per lb.	42
do do 3 F	"	33
Sweet Quinine	per oz.	2 00
Tamarinds	per lb.	12
Tannin, bottle included	per oz.	35
Tapioca, Rio, bg bag	per lb.	13
Less than bag	"	16
Tar, Carolina, pure	per bbl.	6 50
Tincture Presses, ½ gall	each	10 50
do 1 do	"	15 00
Tonqua Bean	per lb.	80
Augostura	"	1 15
Uva Ursi, French	"	15
Valerian Root, English	"	75
do German	"	33
Vanilla Beans, short	"	12 50
do long	"	14 50
Venice Turpentine	"	28
White Wax, pure	"	90
Zinc, Sulphate	"	12

White Leads, French and American Zincs, Tieman's Colors, Varnishes. Etc.

Alcohol, 98 per cent., by bbl	per gal.	$2 40
Axle Grease, National	per doz.	1 50
Frazer's, in wood boxes	"	1 50
do in tin cans, small	"	2 50
do do med.	"	4 25
do do large	"	6 75
Bidwells	"	1 50
Benzole, deodorized, by bbl.	per gal.	16 @ 30
Black Drop, dry, American	per lb.	15
Dry, English	"	15
In oil, 1 lb. cans, English	"	20
Paint, Tieman's, in oil, 1 lb cans	"	12½
Blue, Ultramarine (H. B b'nd)	"	35
Ultramarine, in oil	"	35
Pruss., Tieman's, Paris, dry	"	80
do Paris, in oil	"	70
do Chinese, dry	"	85
do A, dry	"	70
do A, in oil	"	55
do Manh'n, dry	"	65
do Manh'n, in oil	"	50
do Knick'r, dry	"	52
do do in oil	"	40
Brown, Spanish, by bbl	"	2
Less than bbl	"	3
Gold leaf, XX, deep	per pack	9 75
do pale	"	9 00
Green, chrome, Tieman's, pure dry, No 1	per lb.	18
Tieman's, pure, in oil, No. 1	"	19
do Manhattan, dry	"	16
do Manhatt'n, in oil	"	17
do Knickerb'r, dry	"	14
do do in oil	"	15
Green, Paris, Tieman's, dry	"	30 @ 40
do do in oil	"	30 @ 50
do do ex. permanent, in oil	"	40
Hampden, dry	"	24
Hampden, in oil	"	25
Magnesia, Heineman & Steiner's, dry	"	25
H. & S.'s in oil	"	26
Marseilles, Wood's, in oil	"	28
Lamp Black, Eddy's, refined, by bbl	"	30
Less than bbl	"	32
1 oz. papers, per 100		1 00
Common, assorted	"	9
¼ lb. papers	"	11
½ lb. papers	"	12
Germantown, assorted	"	15
do ¼'s	"	18
do ½'s	"	16
do 1's	"	13
Lead, White, Jewett's	per 100 lbs.	13 75
Atlantic	"	13 75
B. L. Fahnestock's	"	13 75
Fahnestock, Hazlett & Schwart's	"	13 75
Hall, Bradley & Co.'s	"	13 75
Collier & Co.'s, pure	"	13 00
Collier & Co.'s, str'tly pure	"	13 75
Garden City	"	11 50
Diamond	"	10 50
Lead, Sterling	"	8 00
Continental	"	11 50
Assorted cans, 1 to 5 lbs	"	12 00
Dry, white	"	13 50
Red, American	"	12 50
English, 112 lb. kegs	"	13 00
Mineral Paint, Ohio, by bbl	per lb.	2¾
Less than bbl	"	3½
Winter's, by bbl	"	3¼
Less than bbl	"	4
Ochre, Oxford, Stone, in oil	"	17
Oil, Carbon, Alex. Schofield & Co., by bbl	per gall.	33
Castor, E. I., by case	"	3 15
do American, by bbl.	"	3 00
Lard, extra, by bbl	"	1 45
do No. 1, do	"	1 30
do No. 2, do	"	1 12

Linseed raw, by bbl.....per gal.		1 03
Linseed, boiled. by bbl.....	"	1 08
Machinery, Eclipse, by bbl.	"	45
do West Va. do	"	60
Neatsfoot, by bbl.....	"	1 20
Olive, bulk, pure Malaga...	"	1 85
do do do Marseilles	"	4 00
do Union.....	"	1 45
Sperm, winter bleached, by bbl.....	"	2 40
Tanners' Bank, by bbl.....	"	1 06
Whale, winter bleach'd, by bbl.	"	1 25
Putty, bulk, 100 lb tubs.....per lb.		4½
In bladders, by bbl.....	"	4⅞
Less than bbl.....	"	5½
Red Indian, dry.....	"	16
In oil.....	"	22
Rose Pink, Tieman,s.....	"	18
Sand Paper, Baeder & Adam, son's, Flint.....per ream		5 50
National, Flint, assorted...	"	4 50
Metropolitan, Flint, ass'd..	"	3 75
Sienna, raw, dry.....per lb.		7
Tieman's, Manhat'n, in oil	"	18
Tieman's, Knickerbocker, in oil.....	"	16
Burnt, dry.....	"	7
Burnt, Tieman's, Manhattan, in oil.....	"	18
Burnt, Tieman's, Knickerbocker, in oil	"	16
Turpentine, Spirits, by bbl.....per gal.		50
Less than bbl.....	"	58
Umber, raw, dry.....per lb.		7
Tieman's, Manhattan, in oil	"	17
do Knickerb'r, in oil	"	15
Burnt, dry.....	"	7
Burnt, Tieman's Mahattan, in oil	"	17
Rurnt, Tieman's, Knickerbocker, in oil	"	15
Vandyke Brown, dry.....	"	12
Tieman's, in oil	"	22
Varnish, coach, No. 1, Turpentine (Smith's).....per gal.		3 00
Coach, ex., Turp., Tilden's	"	4 00
No. 1, do do ...	"	2 75
Furn., No. 1, do do ...	"	2 25
Furn., No. 2, do do ...	"	2 10
Damar, Turpentine.....	"	2 65
Damar, Benzole.....	"	2 40
Japan, Benzole.....	"	90
Japan, Turpentine	"	1 20
Venetian Red, Tieman's, in oil..per lb.		12½
English, Cookson's, by bbl.	"	3¾
English, less than bbl.....	"	4
American, by bbl.....	"	2½
Less than bbl.....	"	3½
Vermillion, Amer'n, Tieman's, dry.....	"	27
American, Tieman's, in oil	"	29
do Hamden.....	"	27
Tieman's California, pale...	"	1 25
do do deep...	"	1 20
Chinese	"	1 30
Trieste	"	1 25
English A. & B., pale.....	"	1 25
English A. & B., deep	"	1 20
Whiting, Spanish, by bbl.....	"	2¾
Less than bbl.....	"	3½
White, Paris, by bbl.....	"	4
Less than bbl.....	"	5
Yellow Chrome, dry, Tieman's pure	"	28
Tieman's Manhattan, dry.	"	20
do Knickerb'r, dry..	"	14
Tieman's Pure, in oil .....per lb.		29
do Manhatt'n, in oil	"	21
do Knickerb., in oil	"	15
Yellow Ochre, Am., by cask....	"	2¼
Less than cask.....	"	3
Rochelle. by cask.....	"	3
Less than cask.....	"	3½
Havre, by cask	"	2¾
Less than cask.....	"	3¼
French, in oil, ass'd cans...	"	12½
Zinc, Veille. Montague, Red Seal, in oil.....	"	16⅛
Veille, Montague, R. S., in oil	"	17¼
Zinc, white, in oil, New Jersey	"	10 50
do do Penn. and Lehigh	"	11 50

Window Glass.

WINDOW GLASS—all sizes—in good shipping order.

Size.	Discount, 50 per cent. 1st Qual.	2d Qual.
6x 8 to 8x10.....	$ 6 50	$5 50
8x11 to 10x15.....	7 00	6 00
8x16 to 12x18.....	8 00	7 00
10x20 to 16x24.....	8 50	.....
10x26 to 20x28.....	10 50	.....
20x30 to 24x30.....	12 00	.....
24x34 to 24x36.....	13 00	.....
25x36 to 30x44	15 00	.....
30x46 to 32x46.....	16 00	.....

Double thick, double price.

Dye Stuffs. Dye Woods and Chemicals for Dyers and Woolen Manufacturers.

Acid, Picric, Cryst.....per lb.		$ 3 50
Pyroligneous .....per gal.		25
Aniline, black .....per lb.		1 25
do .....per oz.		20
Blue, Parme..... .. ..per lb.		9 00
do do .....per oz.		75
do Violet.....per lb.		10 50
do do .....per oz.		1 00
do Hoffman's ....per lb.		15 00
do do .....per oz.		1 25
Brown ....per lb.		9 00
do .....per oz.		75
Green, for wool.....per lb.		80 00
do do .....per oz.		2 50
do for silk.....per lb.		45 00
do do .....per oz.		3 00
Orange.....per lb.		9 00
do .....per oz.		75
Purple .....per lb.		13 50
do .....per oz.		1 20
do Royal .....per lb.		15 00
do do .....per oz.		1 25
Red .....per lb.		8 00
do .....per oz.		60
Scarlet .....per lb.		8 00
do .....per ox.		75
Violet.....per lb.		10 50
do .....per oz.		1 00
Yellow .....per lb.		12 00
do .....per oz.		1 00
Aqua Fortis, carboy.....per lb.		16
do less..... "		20
Barwood.....by bbl. per lb.		4½
Brazil Wood ..... " "		15
Camwood, Commerc'l.. " "		8
do pure..... " "		12
Ebony Wood..... " "		6
Fustic, Cuba..... " "		3½
Hypernic ..... " "		7½

Lima Wood	by bbl.	per lb.	8
Logwood, 'Campeachy'	"	"	3
Nicwood	"	"	4
Peachwood	"	"	6
Quercitron	"	"	31½
Red Sanders	"	"	5½
Sapan Wood	"	"	10
Tumeric	"	"	15

Sundries.

Alum, by bbl	per lb.	$	4½
Annatto, best Para	"	1	65
do Eng. Roll	"		85
Argols, refined, powdered	"		26
Black Lead, E. I., powdered	"		15
German, powdered	"		12.
Bleaching powder, by cask	"		5
Candles, Parrafine, 4's and 6's	"		36
Sperm, 4's and 6's	"		56
Patent Wax, 4's and 6's	"		68
Carmine, No. 40	per oz.	1	30
China Clay	per lb.		3½
Cutch, " Pegue	"		16
Flavine	"	1	00
Fuller's Earth	"		5
Gambier, or Japonica, bales	"		7½
Indigo, Bengal, 1st quality	"	8	50
do 2nd do	"	3	00
Indigo, Gautemala	"	2	30
Macras. 1st quality	"	1	65
do 2nd do	"	1	55
Manilla 1st do	"	1	65
do 2nd do	"	1	55
Extract	"		65
Carmine	"	5	50
Irish Moss, by bbl	"		7
Iron Liquor, by gal	"		45
Lac Lye	"		60
Litharge	"		14
Logwood, Extract, 12 lb. boxes	"		17
Madder, Best Dutch, casks	"		21
do do by bbl.	"		22
Notgalls, Aleppo	"		44
Orchill Paste	"		38
Pearl Ash, by bbl	"		15
Sal Acetosella	"		65
Ammoniæ	"		20
Tartrr	"		20
Sumac, Sicily	"		8
Lead Seal	"		10
Tartar, Cream of, pure, cryst	"		48
do do do powd	"		50
do Red, or Argols	"		26
Tin Bar	"		49
Muriate, cryst	"		48
do solution	"		24
Oxymuriate do	"		30
Per-chloride	"		75

Superfine (XX) Straight or Taper Corks.

No. 0	20
1	24
2	28
3	32
4	37
5	42
6	52
7	85
8	90
9	1 15
10	1 30
11	1 40
12	1 60
13	1 75
14	1 90
15	2 20
16	2 45
17	2 75
18	2 90

Fine (X) Straight or Taper Corks.

No. 0	10
1	12
2	15
3	18
4	20
5	25
6	30
7	38
8	50
9	60
10	70
11	80
12	90
13	1 05
14	1 25
15	1 35
16	1 50
17	1 65
18	1 75

Specie or Flat Corks.

1 inch	40
1⅛ "	45
1¼ "	50
1⅜ "	60
1⅝ "	65
1½ "	80
1⅝ "	1 00
1¾ "	1 20
1⅞ "	1 35
2 "	1 40
2⅛ "	1 55
2¼ "	1 70
2⅜ "	1 85
2½ "	2 10
2⅝ "	2 35
2¾ "	2 60
2⅞ "	2 85
3 "	3 20
3¼ "	3 50
3½ "	4 00
3¾ "	4 50
4 "	

Short Taper (XX) Corks.

No. 2	20
3	25
4	30
5	35
6	45
7	60
8	70
9	90
10	1 00
11	1 15

Soda Corks.

No. 8—1¼ in. long	50
8—1⅜ "	55
8—1½ "	58
9—1¼ "	58
9—1⅜ "	65
9—1½ "	70
10—1¼ "	68
10—1⅜ "	75
10—1½ "	80

THE

CHICAGO MEDICAL JOURNAL

VOL. XXVII.—SEPTEMBER 1, 1869.—Nos. 17 and 18.

COMMUNICATIONS.

Tic Douloureux—Two Cases. Their History, Pervantia and Results.

BY T. A. SMURR, M.D., CLEVELAND, OHIO.

Case 1st. Mrs. A. B., age forty-two, fair complexion and cephalic temperament. Mother of one child, now grown up. Has not been enciente since birth of child, nor suffered from any irregularities of menses, nor any leucorrhœal discharge, but has enjoyed uniform good health. Nor has she been exposed to malaria. About six (6) months since, from some occult cause, a chain of morbid actions set in, resulting in octeritia alba, hyperæsthesia nervosa with hemorrhoids, and latterly great prolapsus ani, and vague and fugitive rheumatic pains, affecting especially the cervical muscles, and which the patient assured me were hereditary.

To use the patient's own words, she had tried every thing, and it did seem to her that doctors did not understand her case, or there was nothing in medicine which could do her good. Dispondency and want of faith might, therefore, be added to the complications. Appetite and sleep were both

capricious, and, all things considered, the patient was a most unpromising one. She was placed upon the following:

PILL: ℞ Sulph. quinia gr. xxi;
" Ferr. pulv. ʒss;
" Strych. gr. ss;
Sol. ext. Fel. Bovin ʒi;
M. Fiant Pill No. xxi.

S. One pill three times daily before eating.

Local treatment of both therapeutical and mechanical sort was employed for relief of the prolapsus. Under this system of treatment the patient rapidly improved, bowels became normal in action, tone was restored to the relaxed parts, the hyperæsthesia was subdued, and the cachexia improved. Sleep and appetite all that could be desired. She was now called from home, and was lost sight of for a time. On her return I was again sent for and found her suffering from a severe attack of tic douloureux of the portio dura nerve and its associate branches of the fifth pair of nerves. On inquiry found the attack had been anticipated by the re-developement of the cachexia, loss of appetite and insomnia, also rheumatic angina of the cervical muscles.

The bowels were constipated, and the renal secretions scant and high colored, dermal secretions almost *nil*. The teeth were all good but one molar, which was much discolored, and had been filled, and from which the gum—which otherwise seems healthy—was separated, and between which was secreted a small quantity of healthy pus. There was no sensitiveness on concussion against any of the teeth. A cathartic was ordered, to consist of pill hydrarg and extract colocynth, to be assisted after a time with an enema of oleaginous character, opiates were given to produce quiet and rest.

Called next day, found my patient no better. Bowels had been very thoroughly evacuated, but the tongue was

still furred and the breath loaded. Kidneys acting more freely with less precipitate. Placed the patient upon the following:

℞ Sulph. quinia, gr. xxvi;
" Strych., gr. ss;
Pulv. sulph. Ferri, ʒiss;
Aquæ cardamomi, ʒvi;
Fl. ext. belladonna, ʒss;
Mixed.

S. A desert spoonful every four hours.

Called next day, Nov. 4, found patient was feeling easier and had begun to feel the action of both the quinia and belladonna. Lengthened the time of dose to six hours, continued treatment of same remedies, and ordered a generous diet of eggs, milk and beef tea, with ablutions of a solution of ammoni carbonas.

Nov. 5. Patient slept soundly during the night, was free from pain, but complained of the feeling in the ears and the effect of the light upon the eyes. Continued the treatment. Was called at 3 p. m., and found her suffering intensely and perfectly wild with pain and excitement. Now determined, notwithstanding the reputed antagonism of opium and belladonna, to use morphine hypodermically, which was done by throwing a half grain into the cellular tissue on inner side of humerus. In fifteen minutes the pain was very moderate, and in a half hour the pupils, which were largely dilated, begun to contract. At the expiration of an hour pupils were the size of a No. 6 shot, after which they seemed to have passed their maximum of contraction and began to dilate again. Injected a quarter of a grain more morphine. Withdrew the medicine she had been using, and substituted ℞ quinia, grs. v, every six hours, with opiates and Fowler's solution five drops, with Ferri chloride fifteen drops three times a day.

Nov. 6. Patient still suffered but not so acutely, was deaf and stupid from the effect of the quinia and morphia.

7th. Passed a pretty refreshing night, but represented

the evening's exacerbation as having been very severe. Bowels moved of themselves. Breath fair and skin relaxed. Lessened dose but continued quinia. Was called at five and one-half p. m., and found her writhing with pain, which was again met by hypodermic medication, one-half grain morph. was followed in ten minutes by sleep.

9th. Patient in *statu quo*.

20th. Pain less intense, but still keeping its peculiar character.

11th. Much worse. A grain of morphine was used at two operations within the half hour. The pinnæ of the ear and tip of the nose very tense with serous infiltration. The left eye was also closed by infiltration of the lids. Stomach irritable. Withdrew all medicines by the mouth, and ordered an enema of oil and turpentine. Beef tea, chicken broth, with a slight flavoring of dilute hydrocyanic acid, carefully manipulated, soon settled the stomach. Opiates used hypodermically.

12th. Patient still suffering when not under the influence of opiates. Again urged the extraction of the tooth referred to before as the probable offending cause, but was put off for the time. Ordered a lotion of chloroform and Tr. Rad. aconite *aa* to be applied to painful parts. P. M., as patient seemed to be very weak, ordered milk punch, with specific directions as to its preparation and exhibition. sul. morph. one-half grain, and left morph. and aconite during night.

13th. Found patient suffering but little pain, but very restless. Slept none during the night. Pulse 124 to 130. Bowels had moved, skin was moist, secretions from kindeys dark and small in quantity. Was at a loss to account for the feeble, rapid pulse. She complained bitterly of the punch, and upon inquiry found that our Emerald friend, true to the record of her race, had blundered, and had given an entire pint of the very best rye whisky during the previous *ten hours*, and had only desisted because the 'supply had failt enteerely, and the doctor, God bless him,

wud ba so disapinted," and so he was. But despite all she was easier, nor was she in the least intoxicated from the spirits, which was most remarkable, not being habituated to the use of any form of liquors.

14th. Still feeling comfortable. P. M. Her catamenia appeared—normal period.

From this to 17th but little change. Evening and morning paroxysms still continued, and the menstrual discharge is light colored and less than usual. P. M. The menses has stopped gradually—usually continued four to six days.

18th. Paroxysms required more morph. to control them than usual. Patient not so well.

19th. Examined mouth, tongue foul, but do not see that my suspicions of the noxious character of tooth were well founded, as it seems not at all tender or swollen. Thus rested the patient until about the 26th, in a state of semi-comfort, sometimes better and again the reverse. In the evening of that day gum along the left side began to swell, and on the 28th made an incision of about one inch in extent, giving exit to a large accumulation of healthy pus. Exploration revealed no caries of alveolus or teeth. I now confidently looked for a respite, if not a recovery. But the 29th came, and with it the same roll of pain, and but little change of medicament. Then the 30th dawned full of pain, and almost despairingly I turned the case over again, hoping some light as to cause or treatment might be poured upon a most unpromising subject. Bowels had not moved for a few days, and as breath was again becoming fetid and stomach irritable, the patient was ordered ℞ Pill, Olem Tiglii., containing one drop each of fresh oil. S. To be taken at once and followed by one every two hours until bowels were freely moved. ℞. Vinum colchic. sem. was ordered every two hours with opium sufficient to control pain.

Dec. 1st. Bowels had moved very freely, and much scybala of a light clay colored interior, but exteriorly of a sanious slate color, and very offensive. Patient had passed

a very refreshing night and felt very hopeful. The vinum colchic. was now combined with pepsin wine, and a very generous animal diet, and vigorous shampooing of all the muscles was directed. The patient improved daily.

On the 10th the bowels became again sluggish, and in a day or two after a relapse was seriously apprehended, but a brisk action from Oleum Tiglii and all pain was at an end.

The patient made a slow but continuing recovery, which has been uninterrupted by return of neuralgic pain to present writing, some nine months, and further, retains the condemned tooth, which, since the thorough incision referred to, has not given the least trouble.

A Uterine Polypus Removed with the Aid of Ergot.

BY R. F. HENRY, M.D., OF PRINCEVILLE, ILL.

Mrs. A———, aged about forty years, married to her second husband. Had never borne any children, but at the time above mentioned had some prominent symptoms of pregnancy. She had uterine hæmorrhage, and was supposed to be threatened with an abortion when I was consulted. An examination of her vagina revealed a dilatable os sincæ, and a tumor within the cavity of the uterus, very nearly the form and size of a fœtal head at six or seven months (judging from the part presenting and within the reach of the fingers). Not being satisfied, at this time, as to the nature of the case, I administered internal styptics, and succeeded in controlling the hæmorrhage for the present, and the patient got along very comfortably for several weeks; but the hæmorrhage returned several times during the summer, with varied severity, and finally, in December, 1857, a more violent attack than usual came on, which did not yield to the ordinary treatment. I then administered ergot in repeated doses, which not only controlled the hæmorrhage immediately, but in a few hours, forced the tumor through the os externum. It was then discovered

that the tumor was attached to the fundus, had dragged it down with it, and thus partially inverted the uterus. The tumor was fibrinous, pear-shaped, with a short neck, and thin near the place where it originated. With the assistance of my friend, Dr. L. M. Andrews, we placed a ligature around the neck, and removed the tumor with a knife. The uterus immediately returned to its natural position. The ligature was withdrawn in a few days, and the patient recovered without any serious difficulty. The weight of the tumor was two and three-fourth ounces.

Poisoning by Belladonna.

Ossian, Iowa, Aug. 2, 1869.

Editor Chicago Medical Journal:

The following case may be of interest as it demonstrates, to me at least, the antagonism between belladonna and opium.

Was called in great haste to see a woman a mile out of town. I got there as soon as possible and found the old lady perfectly delirious. Face swollen and flushed; eyes injected and pupils dilated to their fullest extent; would, stagger and fall when she attempted to walk; tongue swollen and could not speak audibly; pulse small and flickering; was constantly reaching after imaginary objects in the air.

My diagnosis was, poison by belladonna.

I inquired if she had been taking anything, when one of the children said that Dr. Small had been there. This Small is a drunken traveling quack, who is stopping awhile in our town.

I got them to give me the medicine, which made me sure in my diagnosis. She had vomited just before I got there, and had taken the medicine, as near as I could learn, about four hours before. I was preparing to give an emetic when she vomited again. I then gave her one half grain of acetate of morphia, and repeated it every half hour till the

pupil began to contract, which it did after the third dose. I then lessened the dose, and continued at longer intervals, till reason was fully restored, which was about fifteen hours after she took the first dose of morphia.

I called at the drug store and requested to see the prescription, having the medicine with me. And here it is, and you can see that one dose contains about fifteen grains of Ex. Belladonna.

℞. Muriate Ammonia ℥iv.
Ex. Belladonna ℥ij.
Aq. font ℥xij.
Mx.
Dose—ij℥ twice a day.

I am of the opinion if the old lady had not vomited freely it would have been all day with her.

Yet I am confident, from watching her closely, that morphine, in this case at least, produced a decidedly antagonistic effect. Yours,

N. A. Drake, M.D.

FOREIGN ITEMS.

Investigations into the Intimate Structure of the Pancreas.

BY DR. GIANNUZZI.

It is generally believed that the structure of the pancreas is identical with that of the salivary glands, but my investigations have demonstrated the contrary, and it may be readily perceived that there are marked differences.

I hope to present to the Academy (of Sciences, Paris), at an early day, my memoir, *in extenso*, with appropriate illustrations. From this time I may say:

1st. The excretory ducts of the pancreas have very thin walls, which are lined interiorly with cylindrical epithelium. They have not the same connection with the secretory vesicles as in the salivary glands, but they establish around

them a network composed of very fine tubes, which have no epithelium, and which surround with their meshes the pancreatic cells. This network may be compared to that of the bile ducts of the liver.

2d. The network of the excretory ducts of the different vescicles, which form the same glandular lobule, have interconnections and constitute a common system.

3d. The blood vessels of the pancreas follow, generally, by means of their terminal ramifications, the course of the pancreatic duct. They surround the vescicles and the glandular lobules by their capillaries, which are interposed within the meshes of the pancreatic ducts.

4th. The pancreatic vescicles have no walls.

5th. The pavement epithelium of the vescicles is formed of flattened cells with nuclei and prolongations. They are, in fact, very similar to those of the salivary glands. However, the nuclei are readily seen, and the proto-plasma is more granular and contains fatty granulations.

6th. I have not found, in the glandular vescicles of the dog, upon which I made my investigations, the semi-lunar bodies which I discovered for the first time, in the sub-maxillary gland of the same animal (Berichte d. Koen. Sachs. Geselsch. der Wiss. Sitz., Nov. 25, 1865). The presence of these bodies has been confirmed and again found in other animals by MM. Kölliker, Heidenheim and Boll.

The injections of the pancreatic ducts were made with Prussian Blue, and those of the blood-vessels with gelatine and carmine. The apparatus which I used was the continuous-pressure apparatus of M. Ludwig. I was obliged, always, to use very little force; at most that which would be produced by a column of nine or ten centimetres of mercury.

Bibliographical—The Pathogenesis of Hæmorrhages.

BY CH. BOUCHARD (PARIS SAVY. ED.).

Etiology may be deduced from pure observation; pathogenesis demands a knowledge of anatomy and physiology.

What we can accomplish to-day in this direction, corresponds exactly to the degree to which our age has arrived in its notions of normal anatomy and physiology, and it is thus that pathogenesis may become positive.

Medicine formerly could not attain to such pathogenesis; in what relates to hæmorrhage M. Bouchard proves it, in his historical sketch, in which is shown, in a striking manner, the outflow of imagination which served Stahl as his pathological physiology.

The circulatory system is an aggregation of canals closed every where; how can the blood escape, by transudation or by rupture?

The ancients believed, by the former method, diapedesis. M. Bouchard very formally rejects this. The issue by exosmosis from the vessels of the coloring matter of the blood, dissolved in the serum, must not be confounded with hæmorrhage. The recent and curious experiments of M. Cohnheim, according to which the white globules of the blood escaped from the vessels by means of amœboid movements, and the red globules by pre-existing stomata, are not yet beyond the limits of controversy, and already it has been demonstrated that the pretended stomata are only illusions of the microscopist.

Hence normal blood, anatomically and chemically complete, escapes from the vessels by rupture only.

Rupture, moreover, either by exaggeration of the tension of the blood, or by diminution of external pressure and of the support which the surrounding tissues impart to the vessels, or by alteration in the consistence of the vessels themselves.

The first process is much the most frequent. Rupture, moreover, in the small vessels is much more frequent in the little veins than in the arteries; pathological anatomy furnishes proof of the fact.

The author gives a theoretical explanation of this. As regards the true capillaries without perivascular sheathes, they perhaps never rupture. Physiologically, the arterioles

and especially the veins are little disposed to rupture, in consequence of their extreme dilatability, which, moreover, pertains to them by their situation and their office in the circulation.

It is in these that the paralytic congestions depending upon the nervous system (fever), are manifested; here, also, is accumulated increased arterial pressure (plethora) or venous (obstruction of the veins.)

In the second manner those hæmorrhages occur which take place upon the surface of cavities suddenly emptied, of which the capacity is suddenly increased, especially if the vessels are unsupported except by an adventitious membrane, (hæmorrhagic pleurisy and pericarditis), the hæmorrhages from compression in persons who work in the midst of compressed air, cerebral, renal, splenic and pulmonary hæmorrhages, those of soft morbid tissues, certain other conditions of the state of the vessels and of the circulatory functions being given. The author enunciates without discussion the doctrine of M. Feltz upon infarctus; infarctus would involve always the tearing of the vessels and the infiltration of the blood, the opinion which we should desire to see prevail over that of Lefeuver (Thesis, Paris, 1867, No. 195), according to whom infarctus is sufficiently characterized by the mortification of a tissue deprived of its nu ritive elements by arrest of arterial circulation.

SOCIETY REPORTS.

Chicago Medical Society.

Friday Evening, July 23, 1869.

Regular meeting Chicago Medical Society, President Bogue in the chair. Minutes of the last meeting were read and approved.

Proposals for new members being in order, Dr. F. W. Coffin was recommended by Drs. C. T. Parkes and Quales, and was referred to board of censors.

Reports of special and standing committees being in order, Dr. Quales read a lengthy, but interesting, report of the sanitary condition of the North Di-

vision of the city. Remarks were made by Drs. Reed and others, when the report was accepted and ordered placed on file.

Reports of cases and exhibition of pathological specimens being next in order, Dr. Reed remarked that he had been called to a number of cases of cholera infantum. A few were accompanied by convulsions. While he had avoided mercurials in some cases, he had found them of positive advantage in others; that he usually used them in the form of sub. muriate, combined with very minute quantities of morphia. He spoke favorably of bismuth, sub. nitras and the chalk mixture. After further remarks upon children, he stated that he had been called to a severe case of cholerine in an adult, which presented all the symptoms of Asiatic cholera, and would have been diagnosed as such in cholera season. The patient recovered.

Dr. Marguerat asked, in the treatment of cholera morbus, the propriety of using stimulants; that he had seen much good derived from the use of burned brandy, and this year, among children, had received special benefit from pepsin; thought morphia should be given to infants with exceeding caution.

Dr. Fitch remarked that for years he had given morphia to children, often combined with calomel and bismuth, always placed dry upon the tongue, and had seen no fatal consequences of narcotism, as described by the other gentlemen. Where the gums were tumified, he was in favor of scarifying them early. Gave as little liquid as possible. Used sinapisms to the epigastrium.

Dr. Avery stated that he used, in cholera infantum, a powder containing hydrarg. cum. cretæ and pul. doveri camphorata, the dose being adapted to the age of the child, with excellent effect.

Dr. Wanzer remarked that he had seen rather an unusual number of cases of cholera infantum this year; that most of them had recovered under very mild treatment. Where the discharges were painless, frequent and watery, one grain of calomel, divided into eight powders, one of which, given every two or three hours, was usually all-sufficient to cure the child, when seen in the onset. Where the discharges had continued several days, with vomiting, half a grain of bismuth, sub. nitras, was added to each powder of the mercurial, alternating with limewater and sweet milk, as food and medicine, prohibiting the use of water and other liquids, excepting its natural nourishment. Had seen a number of cases with dysenteric symptoms, with abdominal pain and tenesmus; the best treatment found for this was, combined with the calomel, minute quantities of pul. opii and plumbi acetas. Sinapisms to the epigastrium and bowels were not forgotten. He could bear testimony with Dr. Marguerat to the therapeutical value of pepsin in those chronic cases. After the discharges became modified by the calomel, there was often a degree of emaciation, a want of digestion and healthy assimilation, which function the pepsin seems to aid in re-establishing, alternating with this small portions of the best undiluted port wine. Had seen a number of cases of active cholera morbus; one case, a lady æt. 50, who had all the premonitory symptoms of Asiatic cholera. Calomel, morphia and bismuth were given internally, warmth and revulsives were applied to the sur-

face. Stated in our last visitation of cholera he found it difficult to obtain medicines to arrest the persistant vomiting; finally administered a decoction of composition powder. Saved one patient with it in collapse. A drachm of the powder to one teacupful of boiling water, sweetened with loaf sugar, a teaspoonful to be given every quarter of an hour after vomiting until relieved.

On motion, Society adjourned. HIRAM WANZER, *Secretary.*

CHICAGO, FRIDAY EVENING, Aug. 6, 1869.

Regular meeting Chicago Medical Society, President Bogue in the chair.

Minutes of the last meeting were read and approved.

Proposals and election of new members being in order, the board of censors reported the case of Dr. Coffin favorable, whereupon he was balloted for and elected.

The Society now proceeded to the discussion appointed for the evening, viz: The pathology and best treatment for chlorosis.

Dr. Merriman stated: Chlorosis is a disease occurring usually in young girls at the age of puberty, though it has been met with in both sexes, and at all periods of life. Among the earlier symptoms are languor, lassitude, depression of spirits, nervousness, constipation, loss of appetite and disturbance of the catamenia. As the disease advances, these become more marked; the functions of digestion and assimilation become greatly disordered, with an abnormal appetite; a craving for unnatural food frequently exists; severe nervous disorders set in—headaches, neuralgias, hysteria, dyspnœa, cough, palpitation, oedema and anasarca often are present; in many cases emaciation becomes extreme, and the patient dies of phthisis pulmonalis. The appearance of a patient suffering from chlorosis is very noticeable. The countenance has a pale, waxen, greenish hue; the eyeballs seem to be enlarged and to stand out very prominently; the lips and mucus membrane are pale, and there is every appearance of anemia. So marked is this symptom, that many physicians recognize no difference between chlorosis and anemia; but there is a difference. In anemia there is a deficiency of the red corpuscles of the blood (not the white), and of the fibrin. In the blood of chlorosis there is a deficiency of both red and white corpuscles, while the fibrin exists in normal amount. Chlorosis is regarded by the best authors of the present age as a disease of the ganglionic system of nerves. The predisposing causes are age and sex. Among the exciting causes are—1st, depressing emotions, as grief, anxiety, fear, homesickness, disappointment, &c.; 2d, prolonged, fatiguing mental labor; 3d, deprivation of light, fresh air, exercise, good food and sleep; 4th, shocks to the ganglionic nervous system, as when the menses are suddenly stopped through exposure to cold or wet. In the treatment we need to surround the patient with good hygienic influences, cheerful society, amusements; to regulate the bowels by warm laxatives, as aloes; to assist digestion by the acid and bitters tonics; to sooth the nervous system by hyoscyamus, valerian, &c.; to fortify by other nerve tonics, as the shower-bath, electricity, strychnine, arsenic, and, when the digestive system will bear it, iron.

Dr. Fitch accords with the opinion of Dr. Merriman In the symptoms of the disease; believes there is a diminution in the red corpuscles of the blood and an increase in the white, a want of nerve force and tonicity. That the primary source of the disease may be the nerve centres; that nerve stimulants and tonics are indicated. Both sexes and all ages are prone to it. The treatment should be strongly supporting, to re-establish digestion and healthy assimilation, that exalt the vital actions, that give tone and energy to the impaired nerve centres and increase the red corpuscles of the blood; for this, has found a most efficient tonic in the phosphate of iron and quinia.

Dr. Parkes stated that most needed were medicines to restore the quality and condition of the blood and the primary re-establishment of all the digestive and assimilative processes.

Dr. Reid stated, in chlorosis there was anemia, a want of red corpuscles in the blood. The primary and active cause was defective nutrition, a disturbance in digestion and all the assimilative powers. The defective vitality may be ascribed to the foregoing causes. Thinks other medicines beside iron are called for in the primary treatment of the disease, viz., the oloetic purgatives with ferri sulphas; also, quinia in small doses. The shower-bath need not be neglected, followed by brisk friction. To strengthen the nerve centres and restore the red corpuscles of the blood, some of the ferruginous tonics are now wanted to complete the cure.

Dr. Paoli stated that the pathology of chlorosis was frequently obscured by a variety of causes; believes the often disturbed uterine function is a fruitful cause of the disease; that organic disease of the heart and tubercular deposit in the lungs might develop the disease. The treatment should be strongly supporting, the patient surrounded with the choicest hygenic influences.

On motion, Society adjourned. HIRAM WANZER, *Secretary.*

FRIDAY EVENING, August 20, 1869.

Regular meeting of the Chicago Medical Society. In the absence of President Bogue, Dr. Loverin was appointed to act, for the evening, as Chairman. Reports of cases and exhibition of pathological specimens being in order, Dr. Loverin, presented a fragment of inferior maxillary bones from a child four years old. He stated it followed scarlatina; that there was a want of plasticity of the blood; there was pus formation all over the surface of the body. The abscess he had evacuated with the lancet. Had given the child, iuternally, potassa chloratc and tinct. ferri muriatis. Locally had applied a lotion of soda chloride. The child had recovered.

Dr. Avery reported case of lingering labor. She had irregular uterine contractions for three days. Fearing the exhaustion of the patient a hot sitz bath was given, together with artificial dilation of the os uteri. In a few hours complete dilation was accomplished, and she was safely delivered of a male child.

Dr. Paoli disapproved of artificial irritation, where the os was tardy in dilating. He was accustomed to give one-fourth grain Ant. Pot. tartratis, with

ten grains potassa nitras every half-hour, using also hot sitz bath. He condemns all digital manipulation until complete dilatation of the os.

Dr. Loverin agreed with his predecessor; believes, by artificial irritation puerperal peritonitis may supervene; that all those cases should come under the head of vis medicatrix natura.

Dr. Wanzer stated the case related by Dr. Avery was one of interest to him. He had followed the procedure of the Dr. for several years, where the case was tedious and the os tardy in dilating, by occasionally passing the index finger around its circumference and gently dilating it; he had never seen a case of metro peritonitis or other accident follow such manipulations. From the promotion of rest and relaxation of the os, one-fourth grain Ant. Pot. tartratis combined with ten grains doveri pulveris, will usually secure some refreshing sleep, together with relaxation of the womb and soft parts, and upon awaking the pains will return with renewed vigor. He had also seen labor facilitated by forcible pressure upon the perineum, in the absence of pain. He stated, on the 13th of June, ult., he was called to a young lady in labor with her first child. She had suffered active labor pains for twelve hours and was, up to my arrival, under the care of an inexperienced midwife. Upon digital examination the breech of the child was found occupying a part of the excavation. At the center of the part presenting was a deep cavity, surrounded by lacerated and broken-down tissue, which was diagnosed as the anus of the child. Our opinions were this petticoat doctor had whiled away those long hours making tractions at that point, which was true. Passing the hand between the parts of the mother and child, with the index finger the groin was easily reached. At this juncture the pains subsided. Imitating them by gentle tractions, in about three-quarters of an hour she was delivered of a living child. Upon inspection, all the structures surrounding the anus were a blackened, pulpified mass, easily broken down by the finger. Both external and internal sphincter-ani muscles were destroyed. Both mother and child have made an excellent recovery, and I am creditably informed the child has perfect control over the sphincters.

Dr. W. also would ask the Society the best method of vaccination; that in the month of May last he vaccinated 230 children, and in June but 17. Every precaution was used in selecting the purest matter the city affords, but in at least six per cent. of all vaccinated, alarming symptoms followed. Some returned with arms tumefied twice their normal size, phlegmonous or erysipelatous inflammation around the periphery of the point vaccinated, varying from two inches to the involvement of the whole arm. Others with excavated and discharging ulcers with steep edges, one or two of which did not granulate or cicatrize for two months. There was high febrile action manifested in all those cases; most of them, seen early, yielded kindly to mercurial alteratives, and diaphoretics, and local anodyne and saturnine lotions. Most of the children were of foreign birth. In searching the cause of the phenomenon all those children were found of an aplastic diathesis; some living in streets and alleys with deficient drainage, in illy-ventilated apartments, imperfectly fed and clothed, sleeping upon the floor, breathing, not only their own exhalations, but the pestiferous atmosphere of the neighborhood. With all those unhappy circumstances, all escaped without loss of limb or life.

H. Wanzer, *Secretary.*

EDITORIAL.

Vaccination.

In view of the general attention which the subject of vaccination, and especially animal vaccination, is now attracting on both sides of the Atlantic, and, also, of the numerous reports of cases of spurious vaccination, which have recently been published, it seems not inappropriate to consider the subject somewhat, in the abstract, divested of its practical relations, which being objectively the most prominent and apparent have, by attracting the attention and absorbing the thought of observers, obscured the true question at issue, viz.:

Can vaccination be spurious?

The discovery of vaccine by Jenner was an induction from observed phenomena whose identity was an essential prerequisite thereto; had the so-called spurious forms of vaccination existed at that time, with their multiform manifestations, the splendid generalization of Jenner would have been simply impossible. Since the date of its discovery the disease has been studied, in all its phases, so extensively and so minutely that it has become one of the best known and most familiar of the morbid conditions to which humanity is subject, and there is no other whose type is more clearly defined and more accurately described. In the organic world, especially, there is no type absolutely invariable; none in which variations non-essential to its typical integrity may not occur; but these variations must be non-essential, must not involve specific characteristics; if these be modified the specific identity is lost, and the phenomena must be rejected from the typical category.

That which does not present the characteristics of a species does not belong to that species, but must be included in some other. The distinctive features of vaccine having been so clearly defined, and so uniformly recognized, it would seem strange that at this late day in the history of

the disease, any doubt whatever could rest upon its identity. That such doubt exists the numerous cases of so-called spurious vaccination abundantly testify. If the evidence upon which the spurious character of these cases rests be examined it will be found to consist of variations from the type in the premonitory symptoms of inoculation, in the appearance of the pustule (local manifestation), or in the consecutive constitutional modifications, or in all of these, and these variations are *specific*. If, moreover, the sources from which the virus has been drawn be investigated they will be found to manifest corresponding variations, will continue to appear in all cases through which the virus may, subsequently, be transmitted. It will happen, frequently, that these variations will present sufficient uniformity of feature to permit their reduction to some well-known category, while, at times, their diversity is so great as to render this difficult or impossible, the evidence being rather negative than positive. A comparison of any of these divergent cases with a typical case of vaccination will always afford negative evidence of a specific character abundantly sufficient to exclude it entirely from that category, and this would appear to be all that was necessary for the pathologist, especially when such comparison may be so readily made with a standard so well defined as typical vaccinia; so that the premonitory symptoms of inoculation, the local disease, and the consequent constitutional changes being carefully determined, there should remain no room for error, no foundation for "spurious vaccination."

In this regard all cases must be classified under the heads vaccinia and non-vaccinia, not "spurious vaccinia," which is, at best, but a facetious epithet for a negation, and should, together with all its congeners, be expunged from scientific nomenclature. By determining accurately, and classifying consistently, that which is, and ignoring that which is not, the whole subject will be enlightened by the removal of the mass of rubbish which now obstructs it.

W. H.

What are the Merits of our Chinese Physicians?

The question is intended to imply what are the merits of the Chinese practice of medicine as compared with our own? Our answer is that the Chinese practice of medicine is to ours what the practice before the days of Harvey is to the present.

The superiority of the modern practice over the crude empiricism of the past is almost entirely due to our knowledge of anatomy, physiology, comparative anotomy, pathology and chemistry, and of these sciences the Chinese physicians are profoundly ignorant. Our information in regard to the profound ignorance of the Chinese in these sciences is gathered from the Rev. A. W. Loomis' article in the *Overland Monthly* entitled "*Medical Art in the Chinese Quarter;*" from the writing of Dr. J. G. Kerr, who has charge of the "Medical Missionary Society's Hospital," in Canton; from an article in the *American Journal of Medical Sciences*, entitled "*Remarks on the actual state of Medical Science in Japan*, by Alex. M. Vedder, M.D., late surgeon United States navy, physician to His Highness, the Prince of Nagato and Suwo; from the reports of the "Medical Missionary Society in China;" from a letter received not long since from Dr. A. O. Treat, Pekin, China; from conversation, a few days since, with our friend Dr. Salter, American Consul at Hankow and Kinkiang for the past seven years, and other sources.

Dr. Vedder tells us that "The Japanese system of medicine is essentially based upon the Chinese, and nearly all medical books are written in the square Chinese character, which is read by all professional men." So that what Dr. Vedder tells us of the practice of medicine among the Japanese, is equally true of the Chinese. He says: "As to the professional acquirements of the Japanese faculty, dissection not being at all practiced in Japan, and even correct plates of the human structure being seldom seen, their knowledge of anatomy is exceedingly imperfect; still they have native

names for the viscera, the arteries, veins, nerves, lymphatics, and principal anatomical structures, though topographical anatomy is entirely unknown; in physiology they are entirely in the dark, knowing, for example, nothing of the sympathetic system of nerves, of histology or animal chemistry, and attributing to the *liver* very important moral qualties. The circulation, also, is but imperfectly understood, the physician feeling the pulse at both wrists, from an impression that each side of the body is supplied by a corresponding side of the heart, independent of the other.

"Very many affections are supposed to proceed from the presence of various living organisms and worms infesting the economy, and going under the general name of 'mushi.' I have seen drawings purporting to represent these terrible creatures, and certainly, were any existing, should deem them fully capable of producing all the mischief ascribed to them.

"Most of the medicines employed are of Chinese origin, and are exhibited in bulky powders, or decoctions of certain vegetables, and of most forbidding appearance and taste. Hygiene, the sister of proplylaxis, is indeed a sealed book to the Japanese. As regards obstetrics, the practice is, to a great extent, in the hands of midwives. The use of forceps is unknown.

Of operative surgery the Japanese are profoundly ignorant; they possess but few instruments, and those of very rude construction, but, had they the whole modern 'armamentarium,' the want of anatomical knowledge would prevent them from being of much use. In case of fracture, no apparatus whatever for retention is employed, nor any attempt made at reduction; leeches and plasters alone being used to reduce the tumefaction and mitigate pain; a crutch made at my suggestion for one of the Prince's officers has been regarded as a miracle of skill and ingenuity. The medical men attached to the Japanese Embassy to the United States, practiced most freely upon the credulity of members of the profession there, in their accounts of

hospitals at Yeddo, and of surgical operations performed in Japan. I need scarcely say that all these accounts were gratuitous falsehoods, and that there is not such a thing as a native hospital existing in Japan."

Dr. J. G. Kerr, in speaking of the Chinese physicians, says: "They have, however, no knowledge of the structure of the human system, or of the functions of the various parts. They are also ignorant of the nature of disease, and, to a considerable extent, of the properties of remedies. They have theories on all these subjects which are very elaborate and complicated, but which are absolutely false in every particular.

"The department of surgery can scarcely be said to exist. Beyond the applications of caustics and plasters to tumors and ulcers, and of poultices to broken bones, they are entirely helpless. There is no man in all the empire who can give aid, in any case of accident or disease which requires manual or instrumental interference. They are, of course, entirely without surgical instruments, and all the apparatus which modern ingenuity has applied to the relief of injuries, deformities and diseases."

Says the Rev. Mr. Loomis, "Very few of the Doctors, whether learned or ignorant, who are not more or less under the influence of superstition, believing in the power of supernatural influences and evil spirits to produce diseases, or in the necessity of aid from the good spirits to combat the agency of the inimical spirits."

"So prevalent is the belief among the common people, that the gods are often consulted for information as to which physician shall be employed; also, many apply directly to the gods for medical advice—to the Chinese Æsculapius, or some other god—or to a clairvoyant physician." For a full list of their disgusting remedies, and for a fuller account of their ignorant, superstitious, deceptive and revolting practices, are they not written in No. 6, Vol. 2, of the *Overland Monthly*.

That the Chinese practice of medicine is a compound of ignorance, superstition, and a kind of spiritualism, is a patent fact to the scientific world. For instance, they prescribe among other scientific and efficient remedies, hair,—dandruff,—animal exuviæ,—paring of finger and toe nails of pregnant women,—the placenta,—dragon's bones,—hoof of a white horse,—bull's manure,—ram's horns,—ears,—and many other things of like delicate nature.

REV. F. F. ELLINWOOD, D.D.

The tendency of the popular mind to run after the miraculous in medicine, is peculiar to no age.

> "In physic as in fashion we find
> The newest has always the run of mankind."

The more absurd the method, so long as it is new, the better. A mountebank professes to cure all ailments by the laying on of hands, and the people show their love of the marvelous, by flocking to him in great numbers, and the miracles of our Savior are put in the shade by the works of this new apostle. An imposter from the Celestial kingdom is the latest novelty in the healing persuasion; without respectability even among his own countrymen, "plenty good for Americans but no good for Chinamen," as an intelligent Chinese merchant remarked of this imposter, whom this brother imposter of a D.D., calls "one of the most skillful and most popular physician of San Francisco."

There is no doubt that this Chinaman's theology is equal to his medical knowledge: let us all go and worship at the Josh house. We hope Dr. Ellinwood will go and sit at the feet of their gods and learn something. There is no doubt but that he can learn more politeness and more christianity than he exhibits in this gratuitous insult to a learned profession.

When the Reverend gentleman is attacked again with gout or indigestion, which we hope will be soon, our best wish for him is, that he will find no better medical attendance than that this Chinese juggler can afford, and that he will give him no more palatable potion than the scrapings

of his own toe nails, or a portion of his own ears. But he is the last man to apply for such skill; he will call on the best medical man he can find, probably in the middle of the night, and claim exemption from remunerating him, on the ground of his sacred calling.

This miserable fellow diagnoses all diseases as of one nature—promises cures to all—but wants his fees in advance. Persons in the last stages of consumption, when but few days are left to them on earth, are told that they have nothing but "bad liver and much kidney," and commit themselves to celestial aid to pass the Celestial Gate.

An educated physician is expected to cure everybody; he gets no credit for his cures, but his unsuccessful cases are scored up against him; but the Indian doctor, the spiritualist, and the Chinese barbarian, are not expected to cure, and their failings are passed in silence, but if some lucky one gets well in spite of them, it is trumpeted through the town as an astonishing cure. We set out to speak of Rev. F. F. Ellinwood, Doctor of Divinity, who used the sentence above quoted, in an article on the Chinese, in the *Occident*, of September 18th, but we set upon the other fellow; however, it makes no difference, they are a pretty pair. *Par ignobile fratrum.—California Paper.*

BOOK NOTICES.

IMPORTANT MEDICAL WORKS.

CONTRIBUTIONS RELATING TO THE CAUSATION AND PREVENTION OF DISEASE, AND TO CAMP DISEASES; TOGETHER WITH A REPORT OF THE DISEASES, ETC., AMONG THE PRISONERS AT ANDERSONVILLE, GA. Edited by AUSTIN FLINT, M.D. In one volume 8vo. Cloth, extra, $6.50.

In this volume, Dr. Flint has brought together papers contributed by eminent medical men, from material gathered in the prosecution of the U. S. Sanitary Commission's labors. The titles of some of these papers are as follows:

On the various Influences affecting the Physical Endurance and the Power of Resisting Diseases of the Men composing the Volunteer Armies of the United States, by Prof. Robert Bartholow, M.D.;

On the Causation of Disease, etc., by A. J. Phelps, M.D.;

On Army Alimentation, by Sanford B. Hunt, M.D.;

On Vaccination, Revaccination and Spurious Vaccination, by Elisha Harris, M.D.;

On Scurvy, Diarrhœa and Dysentery, by Sanford B. Hunt, M.D.;

On the Diseases of Nerves, resulting from Injuries, by S. Weir Mitchell, M.D.

The third section of the volume is occupied with the official report of investigations upon the diseases of the Federal prisoners confined in Camp Sumpter, Andersonville, Ga., by Prof. Joseph Jones, M.D. Prof. Jones was a Confederate Surgeon during the war, and his investigations made at Andersonville were by direction of the Confederate authorities.

In addition to the above volume there have been published the following valuable works:

I. INVESTIGATIONS IN THE MILITARY AND ANTHROPOLOGICAL STATISTICS OF AMERICAN SOLDIERS. By Benjamin Apthorp Gould, Ph. Dr., Actuary to the U. S. Sanitary Commission. In one volume 8vo. Cloth, $6.50.

The questions of nativity, age, stature, complexion, color of hair and eyes, occupations, dimensions of body, proportions of pody, dimensions and proportions of head, weight and strength, pulmonary capacity, respiration and pulse, vision, education—these and others embraced in them are illustrated and discussed by aid of a multitude of classified facts.

II. HISTORY OF THE UNITED STATES SANITARY COMMISSION, being the General Report of its work during the war of the rebellion. By Charles J. Stille. In one volume 8vo. Cloth, extra, $3 50.

The inspection of Camps and Hospitals, Hospital Transport Service, Hospital Supplies, Relief on the Battle-field, Special Relief, Warfare against Scurvy, Scenes of Labor at Vicksburg, Chattanooga, Fredericksburg, Gettysburg, The Wilderness, Newberne—these and other divisions of his subject are all woven into an animated narrative, free from cumbersome detail, but fresh with illustration, possessing the great interest of a picturesque historic work.

Published and for sale by Hurd & Houghton, New York.

H. O. Houghton & Co., Riverside, Cambridge, Mass.

The volumes will be supplied by any bookseller.

Further notice of these volumes will be given soon. Meanwhile, we recommend their perusal to our readers.

NEWS ITEMS.

Cheap Enough.—We are enabled to inform the solicitous that an agency has been established in this city for the sale of Philadelphia Diplomas of M.D. Several somewhat notorious characters here have already availed themselves of this royal (albeit, *Paine*-ful), road to knowledge. Did not the phrase savor of slang, we might say that the thing is being done *Brown*. We are informed, through a rejoicing M.D., whose parchment was thus procured, that no attendance upon lectures or examinations by the Faculty is required, but simply a certificate from the local agent that the candidate is worthy. So far has this been reduced to a system that the "Dean" of the Faculty actually writes diplomas down (in a note before us) in the same category with post-office orders.

Practical Suggestion.—A valued subscriber writes: "Allow a suggestion in regard to your Reports of Medical Societies. We do not wish to find fault, but, we think they might be made much more interesting to the general reader, if, instead of telling us that A., B. and C. read interesting papers on gun-shot wounds, contagious diseases, typhoid fever, etc.; and Drs. So and So are to investigate certain very important subjects, and report at the next meeting of the Society, they would tell us more of what was said, what old theories were advocated, what new principles were affirmed, what new discoveries made, etc.

In this way we would know what advances they are making in medical science; what efforts they are making for the "elevation" of the profession.

Very respectfully,

T. A. E.

[Which ideas the Editors cordially endorse.]

The San Francisco *Bulletin* says: "It is a pleasure to note that within a few weeks past a substantial progress has been made toward putting the University of California into practical operation. Seven professors, in all, have been elected, viz.: John Le Conte, M.D., Acting President, and Professor of Physics and Industrial Mechanics; Robert A. Fisher, A.M., Professor of Chemistry, Mining and Metallurgy; Joseph Conte, M.D., Professor of Geology, Natural History and Botany; Martin Kellogg, A. M., Professor of Ancient Languages; Paul Pioda, Professor of Modern Languages; Ezra S. Carr, M.D., Professor of Agriculture, Agricultural Chemistry and Horticulture."

The University of California is especially to be congratulated on the appointment of Prof. Carr. Whilst we regret that any concurrence of circumstances removes him so far from our immediate association, we congratulate the new institution on the zeal and ability he will take to it. No better instructor graces the chair of any college on the continent. The best wishes of all who know him will attend him, wherever he goes. Personally, we fervently trust that when the University achieves the great success this appointment almost necessitates, there will not a new king arise who will not know Joseph [Ezra]. This ignorance is often disastrous.

The Committee on the Library of the American Medical Association send us the following Circular:

Washington, D. C.

The Medical Profession, and Scholars generally, are aware of the ephemeral form in which most of the early American contributions to the literature of medicine were given to the world, and, indeed, in which many of the more recent are being published. This condition of much of our professional literature is deeply regretted by all, and particularly by those whose taste and research lead them to refer to this class of works, when the fact is made apparent that whole editions of tracts and books have entirely perished through neglect. With a view to provide against such a contingency, and preserve, for the benefit of the profession, in some accessible and central locality, copies of all home medical publications, the American Medical Association, at its annual meeting in May last, resolved to establish at Washington, D. C., a Library or Repository of medical works, to which it is believed all the current medical literature of our country will be cheerfully, promptly and constantly contributed.

It is designed that this repository shall contain copies of every contribution by American physicians to the literature and science of medicine, from the earliest settlement of our country, no matter how or where published, including all the books, pamphlets, journals, and even unpublished manuscripts that can be collected.

Nearly all physicians have some book or pamphlet of the character indicated, which may contain facts relative to the diseases of his section published nowhere else, which they can contribute without inconvenience, and which of itself is of trifling value, yet when many such treatises are assembled together from all parts of our country, embracing its nosology from the earliest period of its settlement, they will form a collection of the greatest importance to the profession.

The Librarian of Congress has kindly consented to receive and preserve as a special deposit, in the Government fire-proof-building, any collection of medical works the American Medical Association may make, and will catalogue and keep them in condition to be readily consulted. The accommodation thus offered the Association for accumulating and preserving its library free of cost is most generous and most encouraging. Gentlemen having scarce and valuable American medical publications will not hesitate to deposit them in such a safe, central, and national repository, where they will be preserved from destruction and their usefulness secured to the profession.

An appeal for contributions to this library is now made, personally and distinctly, to each and every American Physician, Medical Publisher, and Editor, to deposit copies of their works in this repository, where they will be carefully kept for reference and catalogued with the name of the donor.

We, the undersigned, members of the American Medical Association, having been selected to carry into effect, as far as practicable, the resolution of the Association to establish a Library, have now completed all the necessary arrangements for the reception and preservation of those books which may

be sent to our care. Contributions of the class of works mentioned, are, therefore, respectfully and earnestly solicited from every source. Packages may be sent by mail or by Adams' express, to either of us, which will be promptly acknowledged on reception, and a record of titles kept. The library-mark of the Association will be pasted on the inside of the cover of each volume, which will contain also the name of the donor.

Hoping that you may further the project to the extent of adding at least your own productions,

We remain, respectfully,

ROBERT REYBURN, M.D., *Librarian.*

JOSEPH M. TONER, M.D., *Library Committee.*

THE LITTLE CORPORAL, the brilliant Western Juvenile (which claims to have a larger circulation than any other magazine), announces that it will come free for October, November and December of this year to all new subscribers for the new year, whose names and money are sent to the publishers before the last of October. Beautiful premiums are offered for clubs. Now is a good time to begin. Price One Dollar a year; sample copy, 12 cents. Address ALFRED L. SEWELL & Co., Publishers, Chicago, Illinois.

THE NEW YORK MEDICAL COLLEGE FOR WOMEN will begin its sixth Annual Term of twenty weeks, at their new College in Twelfth Street, corner of Second Avenue, the first Monday in November. For announcements, giving full particulars, address, with stamps, the Dean, Mrs. C. S. LOZIER, M.D., or the Secretary, Mrs. C. F. WELLS, Box 730 New York.

OBITUARY.

Resolutions of respect upon the death of Dr. F. O. EARLE:

WHEREAS, The Chicago Medical Society has been deprived of one of its members by the death of Dr. F. O. EARLE.

Resolved, That we lament his loss. Although he had been with us but a brief time, we had learned to respect him for his gentlemanly deportment and professional ability. Although quite young in the profession of his choice, we cannot but feel that the close application and devotion to the labor of the profession during his stay among us had much to do in determining his early death, which seemed too soon. The profession has lost an earnest worker. To his family and relatives we may be permitted to express our sincere ympathy in their bereavment.

Resolved, That a copy of these resolutions be sent to the family, and that they be published in the Medical Journals of this city and in the Medical Record, New York.

R. G. BOGUE, M. D.,
F. D. FITCH, M. D.,
A. H. FULLER, M. D.

Dr. Daniel D. Wait.

Whereas, This Society, with profound regret, has learned of the death of Dr. Wait, one of its oldest and most esteemed members; and

Whereas, It is just and proper for us, who honor him best, to record his name in our archives as one highly respected, not only in consequence of his past devotion to the interests of the Society, but as a physician of much intellectual capacity, and one whose character for uprightness and integrity in all its bearings, had but few equals; therefore,

Resolved, That by the death of Dr. Wait, this Society has lost one of its oldest and most esteemed members and Chicago a valuable citizen.

Resolved, That we evtend our sympathies to the family of the deceased in their heartfelt sorrow during moments of affliction.

Resolved, That these resolutions be printed and a copy be sent to his family.

N. S. DAVIS,
G. C. PAOLI,
N. LOVERIN,
Committee.

Hiram Wanzer, *Secretary.*

LOOT.

Permanent Contraction of a Limb Cured by Subcutaneous Injection of Atropia.

M. Desprez obtained a remarkable success in the case of a delicate young lady who had been for some years subject to articular rheumatism, and for a long time past had suffered from a fixed and extreme contraction of the arm, following in rheumatic inflammation of the shoulder joint. When M. Desprez first saw her, there was no remaining swelling of the joint, but the limb was somewhat atrophied from want of movement. Frictions with belladonna accomplished some, but not very much, good. A solution of sulphate of atropia was then prepared, 1 part in 400; and of this 25 drops (1-16 grain) were injected over the pectoralis major. Slight temporary intoxicative symptoms were produced. Three days later there was a marked improvement in the mobility of the joint; the muscles were less rigid, and there was less pain on attempting to move the arm. A second injection of 30 drops (1-13 grain) was made at the same point, and this was followed, at intervals, by three others

of thirty-five drops each (between 1-11 and 1-12 grain), which *completed the cure.* The movement of the joint was quite restored, the atrophy has since disappeared, and the use of tonics and good feeding has subsequently much improved the patient's general health.

Hypodermic Injections of Morphia in the Reduction of Hernia.

Dr. Ravoth reports (Berlin, Klin. Wochensch, Juin 7) some remarkable results from the subcutaneous injection of morphia in cases of hernia which had previously resisted the taxis. Quarter grain doses were used.

In these cases the morphia was injected in the region of the hernia, and when the patient was fully under its influence a loose towel was laid over the face and water dashed rpon it. Even without taxis it is said the hernia was sometimes reduced during the shock.

Prof. Hebra's clinic for skin diseases is mostly attended by foreigners, who pay a double fee, $15.00. He treats about 1,000 patients yearly. Male house patients are divested of their entire clothing, and pass about the class. Female patient are not required to expose the genitals.

Constipation in Old Age.

For occasional use in the treatment of constipation in old age, Dr. J. M. DaCosta (*Medical and Surgical Reporter*) recommends the following formula:

℞ Podophyllin gr. 1-20;
Extract belladonna, gr. 1-20;
Capsicai, gr. 1-4;
Pulveris rhei, gr. j.

For one pill. To be taken three times daily. Belladonna is a stimulant to the muscular fibres of the intestines. Podophyllin is useful in torpor of the upper portion of the bowels, to increase the secretion of the liver.—*Phys. and Pharm.*

Treatment of Lead Poisoning.

Dr. William Frank Smith states (*Lancet*) that in lead poisoning the treatment by iodide of potassium has been less efficacious in his practice than that by sulphuric acid and the sulphates. The formula used by him, which acts, he says, "with remarkable celerity and certainty," is as follows: sulphate of quinine, sulphate of iron, of each one grain; strychnia, 1-36 of a grain; dilute sulphuric acid five minims; sulphate of magnesia, one drachm; water, one ounce; three times a day.—*Med. Gazette.*

The Oxalate of Cerium in the Vomiting of Pregnancy.

℞ Cerii oxal.; ext. lupul, *aa.* gr. xxiv. M. et. div. in pil. xii., cap. i. ter in die. At same time exhibit bromide of potassium in ten grain doses, with the tincture of yellow cinchona bark and spirits of ammonia. The mixture and pills appear to constitute a most successful plan of treatment.—*Dublin Medical Express and Circular.*

Sponge Tents.

Knowing the fact that absolute or *strong* alcohol will quickly *set* the fibres of common sponge, after having been moulded or compressed into any given size or shape, I was led to the following quick and easy method of preparing sponge tents, tampons, etc.

The sponge is first thoroughly moistened with water and pressed as dry as the strength of the hand will permit; then having formed it into the desired shaps and size by the hand, or by pressing into a quill or any other tube or mould, it is immersed into the alcohol. If the spirit is sufficiently strong (90 to 100 per ct.) the sponge is *immediately* set into the given shape, which it retains perfectly after the pressure or mould is removed. It is then hard, firm and inflexible, and may be trimmed to a sharp point, or any other desired shape.

To restore it to its former size and shape it is only necessary to moisten it with a few drops of water. The alcohol

sets the sponge perfectly, whether the amount of compression be much or little, so that the degree of dilitation, attainable by the use of tents thus prepared, will of course depend upon the size after moulding and the degree of pressure used. As this process of preparation works perfectly and *without* delay, its advantages are obvious.—*Boston Medical and Surgical Journal.—Cincinnati Lancet and Observer.*

Medicated Vapors.

Experiments are now in progress at the Neckar Hospital (Paris), and also at the Asylum for Convalescents, at Vincennes (France), upon the application of the vapor of water which has been caused to pass over various non-volatile salts, carrying with it a portion of them, to the treatment of disease. Concerning the Convalescent Asylum at Vincennes, the *Gazette des Hopitaux* reports, upon the authority of M. Dionis, that of forty thousand convalescents admitted there during the past ten years but one hundred and fifty-one have died, in the proportion of one to five hundred and twenty-six.

Metrorrhagia.

Dr. H. E. Gantillon reports to the *Gazette des Hopitaux* a case of metrorrhagia resulting from miscarriage at four months, which, after having resisted various modes of treatment, amongst others three applications of the curette of Recamier, and tamponing the vagina with perchloride of iron, yielding finally and completely to two intra-uterine injections of the perchloride made on the 18th of December and upon the 15th of February following.

The first injection was 15 drops of the liquid of twenty-two degrees of strength; the second twenty drops of thirty degrees. The Dr. uses a syringe of his own invention, with recurrent jets to facilitate the escape of the liquid from the uterus. While asserting that the proceeding is entirely free from danger or risk of accident, the writer acknowledges the occurrence of consecutive fever and uterine and abdominal pain, which, on each occasion of the operation, compelled the patient to remain in bed five days.

Solvents for Croupal Membrane.

The *Gazette Medicia di Lombardia* records the results of many experiments on the solubility of false membrane. The specimens selected were, as nearly as possible, of the same consistence, and of a gramme in weight.

1. Solution of iodide of potassium, one in ten. At the end of fourteen hours the false membrane was reduced to filaments.
2. Sulphate of zinc, same strength. After fourteen hours membrane had shrunk.
3. Bromide of potassium. After fourteen hours membrane was transformed into a pulpy substance.
4. Chloride of sodium, chloride of barium, and hyposulphate of soda give same result.
5. Cyanide of potassium. Complete solution in fourteen hours.
6. Borax. Membrane became yellow and tough.
7. Muriate of ammonia. No result.
8. Sulphate of iron. No result.
9. Carbonate of potash. Complete solution.
10. Sulphate of soda. No result.
11. Chlorated potash. In three hours became like charpie.
12. Lime water. Same effect in same time.
13. Bicarbonate of soda. Perfect solution in three hours.
14. Nitrate of silver, one in ten. Hardening and contraction.—*Med. Press and Circular.*

Lead Poisoning a Cause of Vaginitis.

Attention has of late been much drawn to the subject of vaginitis, and particularly on account of the surgical treatment inflicted upon the women suffering from this affection, and which is recommended as the only cure in such cases. The attention of the medical profession, almost dormant upon this subject since the time of Michon, was all at once attracted thereto by the recital of the cruel mutilations to which Dr. Marion Simms and several of his followers submitted the victims of this singular disease. The treatment of this fortunately very rare affection, as practised by the above very bold American gynæcologist, has found but few advocates among us, and its further practice will not be encouraged by the ætiology of the disease which comes to us from the native country of Dr. Sims.

Dr. Neftel, of New York, relates three cases of vaginitis occurring in women of high social position, in one of whom, on account of the aggravated form of the disease, sexual intercourse had become impossible, coincident with a saturnine intoxication resulting from the prolonged use of a cosmetic containing lead. The intoxication manifested itself by paralysis and atrophy of the extensors, so that the patients were unable to extend their hands, fingers or thumbs, while the supinator muscles, as well as the deltoid, biceps and triceps, were in a normal state. The electro-muscular contractility and sensibility were very much diminished, if not entirely abolished. Two of the patients were cured by the internal use of the Iodide of Potassium and Sulphur, and without having employed any local means for the vaginitis. It disappeared at the same time with the paralysis, so that the married woman who had hitherto been sterile, and had for that cause consulted Dr. Marion Sims, has since become a mother.—*L'Union Médicale and Am. Jour. of Obstetrics.*

Fractures of the Clavicle.

MM. Denonvilliers and Richet demonstrated to the clinical class, at the Children's Hospital (Paris), that fractures of the clavicle oppose no direct obstacle to the upward movement of the arm as has been believed hitherto. The movement is frequently prevented by pain, but its possibility was practically shown, by them, even in cases where the fracture was comminuted.—*Gazette des Hop.*

Among the recently proposed *specifics* for *Diphtheria* we notice, next to lime-water, ranked *lacticacid*, applied in solution by pencil, injection, or atomizer, so as to saturate the false membrane. Dr. Bonaston, in *Union Medicale*, especially commends, on *rational* grounds, the *flowers of sulphur* administered internally, as both curative and prophylactic. Constantin Paul (*Gazette Medicale*) urges *cubebs*, on the authority of M. Trideau, as "precious drug" in this "terrible disease. He employs the extract:

℞. Ext. Cubeb., p. 1 ℥;
Pulv. Sugar, p. 7;
Pulv. Gum, p. 2.

M—Each teaspoonful weighs thirty-eight grains, and to a child four teaspoonfuls may be given daily, dissolved in two or three teaspoonfuls of water. Locally, perchloride of ron.

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVI. — OCTOBER, 1869. — No. 19.

Original Translations.

ARTICLE I. — *Investigations into the Pacinian Corpuscles.* By DR. M. GRANDRY, Liége.

THE history of the corpuscles of Vater and of Pacini seemed to be complete, when, recently, Leydig indicated the existence of a new structure in the corpuscles, which is met with in the beak of the woodcock.

According to Leydig the corpuscles of Pacini are composed of a certain number of conjunctive capsules enclosed the one within the other, the innermost being more closely adherent to each other than the more external. At the centre is found a cylindrical cord of a homogeneous and granular structure, whose axis is occupied by a very fine canal. This cord appeared to be the thickened termination of a nerve-fibre which may have penetrated into the Pacinian corpuscle. After having lost its double contours, that is to say, its medullary sheath, this fibre might be thickened into the central cylindrical cord of the corpuscle. The Pacinian corpuscles of birds should present the same type, and should differ from those of mammiferæ only in secondary points.

According to Kölliker and other authors, the central cord

which Leydig considers of a nervous character, should be of connective tissue, and the central canal of Leydig should be the termination of the fibre.

Recently, Leydig has described another structure in the Pacinian corpuscles and in those of the beak of the woodcock. The central cord should not be homogeneous and granular, but should contain in its interior particular bodies, and should present a particular striation.

The particular bodies are quadrangular bodies all of the same volume, not contiguous, but separated regularly from each other by granular matter and presenting a characteristic arrangement. They are found united under the form of two linear series, parallel to the axis of the central cord; they are more separated from the centre of the cord than from the connective envelope, although, however, they are not in contact with this; they are separated from it by an interval clearly visible and formed by granular matter analogous to that which constitutes the rest of the central cord.

Besides these particular bodies Leydig describes two orders of striæ upon the central cord. The first order is formed of transverse striæ which connect the particular bodies from one side to the other. The other order of striæ is oblique, so that the striæ starting from the centre are directed obliquely outward toward the superior part of the corpuscle. The canal may be visible in a portion of the central cylinder only near the entrance of the fibre, and not throughout its extent.

As to the histological signification of the particular bodies and of the striæ, Leydig seeks to compare them to the little rods which Mr. Shultze has described in the eyes of the arthropods. The media employed by Leydig for study of the Pacinian corpuscles are acetic acid and glycerine.

My investigations have been made upon the Pacinian corpuscles of the bill of the duck and of the goose, and upon those of the mesentery of the cat, with the same media as Leydig and also with hyperosmic acid and chloride of gold.

PACINIAN CORPUSCLES OF THE DUCK AND THE GOOSE.

The Pacinian corpuscles of the skin of the bill of the duck and the goose, although formed after the ordinary type of cor-

puscles which are found in other birds, differ from them, however, by the structure of the central bulb, and approximate to those described by Leydig in the woodcock.

They are formed of a connective envelope and a central bulb. The connective envelope is composed of two portions, clearly distinct; one external, formed of concentric capsules, the other, internal, formed by a connective tissue of fine fibres interlaced in every direction, but whose most internal parts, however, seem to form layers concentric to the central bulb, at least after the addition of acetic acid. The internal portion of the envelope is sufficiently colored to prevent the examination of the corpuscles unless acetic acid be employed.

In relation to the structure of the central bulb; two species of Pacinian corpuscles should be distinguished: the first resembling perfectly the corpuscles observed in birds, the second presenting much analogy to those which Leydig has so lately described.

As in the woodcock, so also in the duck, there exists in the central bulb, rounded and quadrangular bodies placed in two series by the side of the central fibre (central canal of Leydig) at regular intervals, and separated by finely granular matter, having no relation with the envelope, from which they are remote and separated from it by the same substance which isolates them from each other.

These bodies exhibit in their interior a more opaque point, which may be considered as nucleus or nucleolus, according as they (the bodies) are regarded as cell or nucleus.

The central fibre of the Pacinian corpuscles of the duck or the goose appears entirely similar to that of the corpuscles of other birds. However, the terminal extremity of the fibre in these animals is found to be more voluminous and more granular than that which is found, for example, in the Pacinian corpuscles of the pigeon in the space between the tibia and the fibula.

I have never discovered corpuscles in which the fibre bifurcated near its terminal extremity as in the cat; I have, however, observed the division of the fibre a little after its entrance into the central bulb, and then there was seen in the same corpuscle two central bulbs united by one extremity.

All the characters which I have just indicated are very easily recognized by the action of weak acetic acid alone, but the whole

becomes much more clear if the preparation be made by using weak chromic acid.

The corpuscles of the woodcock, in addition to the particular bodies, present striæ; it has been impossible for me to detect them in those of the duck or goose.

The chloride of gold has likewise a remarkable action upon these corpuscles. If the skin of a duck's or goose's bill be placed in a solution of chloride of gold of $\frac{1}{100}$ for twenty-four hours, as soon as the action has been completed the entire bulb is seen to be strongly colored, and to be continuous with the fibre in such a manner that this latter seems to terminate by a swelling which is no other than the entire bulb. This reaction seems to plead in favor of the opinion of Leydig, who considers the entire bulb as the termination of the nerve; but a less complete degree of reaction, and especially hyperosmic acid, shows in a perfectly clear manner that the fibre is continuous entirely through the central bulb, and that, at least, the peripheric part of this has not the same composition as the centre, and that that which Leydig considers as a canal is the immediate continuation of the axis cylinder of the fibre which enters into the corpuscle. If the chloride of gold has acted incompletely, the centre will be seen to be first attacked and then the exterior; very frequently even the whole is attacked and the fibre is most marked at the centre.

As to the corpuscles of Leydig, they are uniformily colored like the rest of the central bulb, and in the case of complete reaction, it is impossible to recover any traces of them.

The chloride of gold, which does not attack the envelope, and on the contrary colors the entire central bulb, tends to show that the tissue which surrounds the fibre, approximates, by its characters, more closely to nerve-substance than to connective tissue.

Hyperosmic acid shows best the central fibre and the terminal granular swelling. However, it colors likewise, but less the rest of the central bulb. By means of this re-agent, the central fibre may sometimes be seen terminating by a little swelling in the midst of the ordinary terminal swelling.

By the side of the Pacinian corpuscles another form of nerve termination is found in the bill of the duck and of the goose, about the structure of which I am not yet altogether decided, especially as regards the termination of the nerve. I believe it

useless to describe, and refer to the plates which will give much better than a description, an exact idea of their form, etc.

PACINIAN CORPUSCLES OF THE CAT.

Previous investigation has established in a manner almost complete the structure of the Pacinian corpuscles of the cat; I shall only speak of the action of certain re-agents, which have enabled me to recognize some details not described thus far, concerning the passage of the nerve-fibre into the central bulb, and concerning its mode of termination. The re-agents employed have been iodserum and hyperosmic acid.

If the mesentery of a cat be placed for several hours in a solution of hyperosmic acid of $\frac{1}{400}$, the following particulars may be observed:

The nervous fibre pertaining to the corpuscle is colored intensely black up to its entrance into the central bulb, and at this point the color diminishes abruptly, and shows that the medullary sheath is not continuous with the fibre into the interior of the bulb.

The fibre after its entrance is colored moderately brown, and is seen to be situated longitudinally.

The enlarged and granular portion which is considered as the termination of the nerve, exhibits a peculiar structure. The nerve-fibre in reaching this point, is divided into a great number of fibrillæ which terminate in a roundish granular mass, and it is impossible to follow them further than the half of the depth of this mass; the extremities of the fibrillæ are readily seen terminating abruptly in the midst of the granulations, and nearly all upon the same level, so that the terminal organ of the fibre is seen to be formed in its inferior half by fibrillæ and granular matter, and in its superior half by a mass formed of granular substance, limiting in the clearest manner the substance which constitutes the remainder of the central bulb.

I have endeavored to determine if the fibres expanded in diverging to embrace a round, granular mass, or if they penetrated into its interior, but it is impossible for me to decide upon this point. Perhaps the same mode of termination of a fibre at its peripheral extremity may exist here, as that lately described by M. Schultze as the termination of nerve-fibres at their central

extremity in the nerve-cells. By means of iodserum, one may recognize in pieces perfectly fresh, the same structure of the terminal swelling as that denoted by the action of hyperosmic acid.

The investigations whose results have been detailed in this treatise, were made in the laboratory of M. Schultze, and I here return my thanks to this distinguished scholar for the kindness which he has shown me in directing me in my investigations.

W. H.

ARTICLE II. — *Investigations into the Terminations of the Cutaneous Nerves in Man.* By DR. GRANDRY, Liége. (Robins' Journal de la Physiol et de l'Anatom.)

IN this article the mode of termination of the nerves in the corpuscles of Meissner will alone be discussed. As to the modes of termination indicated by Langerhaus, and to that in the tactili papillæ indicated by Odenius, they shall be discussed in a subsequent article.

The history of the corpuscles of Meissner has been discussed for a number of years, and the different observers by no means agree concerning the intimate structure of this terminal nervous organ, and especially about the mode of termination of the fibre itself. The bibliographical question having been very well treated in the paper of M. Rouget,* it is not necessary to return to it here. I shall only concern myself with the terminal extremity of the nerve, and with its relations to the envelope of the corpuscle.

Before describing the result of my observations, I shall give, in detail, the process followed. Fragments of skin of the fingers taken from an arm amputated in consequence of a white swelling of the elbow, were placed in different re-agents — acetic acid, bichromate of potass., chloride of gold, hyperosmic acid — and it was by the use of the re-agents that I obtained the results which I shall describe. With the solution of the bichromate of

* *Archives de Physiologie Normale et Pathologiques.* Publiées par M. M. Brown-Sequard, etc. No. 5, 1868.

potass., or the solution of Müller, I succeeded best in seeing the termination. For the course of the nerve itself, hyperosmic acid should be used in preference.

Several points should be considered in the examination of the corpuscles of Meissner: 1st, the envelope; 2nd, the central bulb; 3rd, the course of the fibre; 4th, its mode of termination.

The envelope is formed of dense connective tissue, as Kölliker admits, and I believe with this observer, that the transverse nuclei which are seen at the surface, especially under the action of acetic acid, belong to the connective tissue. In any case, I have not been able to discover the spiral arrangement of the fibre reduced to the condition of axis-cylinder. I believe the central bulb to be altogether analagous to that of the Pacinian corpuscles, and therefore I refer to what I have said of the reaction of chloride of gold upon these corpuscles. However, there is one fact to which I desire to direct attention successively. It is the existence, in the interior, of this central bulb of morphological elements, a fact denied by some observers.

The course of the medullary fibre is exactly that described by the majority of observers; that is to say, that it forms a spiral with large coils around the corpuscle, and thus reaches the upper portion of the corpuscle, still remaining within the envelope, without penetrating the central bulb. Does the medullary fibre always advance toward the exterior of the central bulb? I do not believe it, for I have distinctly seen, under osmic acid, the fibre in the interior of the envelope, and the solution of Müller has equally well demonstrated it to me penetrating into the central bulb still provided with medullary matter. Many opinions are held concerning its mode of termination. Rouget says that the fibre terminates in the central mass, being continuous with it, so that the central bulb may be considered as the fibre enlarged, and according to this author the morphological elements should be analagous to those found in the terminal plates of the muscles. I, however, have ascertained that the nerve does not terminate by becoming continuous with the central mass, but, indeed, with the morphological elements which are found in its interior; and this suggests thoroughly the terminal enlargements of the Pacinian corpuscles. Moreover, I have made the following observations upon transverse sections of the corpuscles of

Meissner, from the pulp of the fingers, treated by the solution of Müller.

I observed in their interior bodies more or less spherical, granular, varying (in diameter) from $0^{mm}00S$ to $0^{mm}01$, which seemed frequently isolated and having no relation with a fibre or with the envelope, and situated most frequently close to the vertical axis of the corpuscle. Attentive examination, and good preparations, permit the detection, besides the spherical bodies, of excessively pale fibres lying in different planes not anastomosing, separating from the envelope, not losing themselves in the granular matter, but becoming continuous with the morphological granular elements, so that the latter appear pediculated. A fact well worth noticing is that the fibres separating from the envelope do not go directly to the granular bodies, but describe sinuosities more or less large before reaching them. I have seen a nerve fibre with double contour penetrating into the interior become reduced to the state of axis-cylinder and become continuous with the granular bodies.

At this point the question may be asked: Does the fibre terminate in a brush of more minute fibres reduced to the state of axis-cylinder; or, in describing spirals around the corpuscle, does it send out lateral branches which, passing on, terminate in the central bulb? I could not actually determine this. I believe, however, that there are lateral fibres sent out by the principal fibre; but I am not indisposed to believe that at its termination the medullary fibre subdivides into several branches. I have seen fibres separating from the lateral parts and terminating in the central mass by granular enlargements. What I have said concerning one fibre is applicable to corpuscles which receive several of them. Each one of them sends off branches which terminate by a swollen extremity in the central bulb.

If, now, comparison be made between the corpuscles of Pacini and the corpuscles of Meissner, it will appear that, in the corpuscles of Meissner, the termination of the nerve does not differ from that of the corpuscle of Pacini; that in both cases the fibre is terminated by a swollen extremity; the only difference being that in the corpuscles of the skin the fibre furnishes a greater number of terminal extremities, although three of them might have been found in the corpuscles of Pacini. I have not been

able to determine whether the axis-cylinder behaves in the corpuscles of Meissner as in those of Pacini; that is to say, whether they divide into fibrillæ upon reaching their terminal enlargement.

My investigations have been conducted in the histological laboratory of the Faculty of Medicine of Paris, under the direction of M. Robin (Professor), to whom I here testify my gratitude for his wise counsels given to me upon all occasions. W. H.

Hospital Reports.

ARTICLE I. — *Cook County Hospital.* Reported by CURTIS T. FENN, M.D.

THE number of fractures in the Surgical Department of Cook County Hospital is sufficient to show that these injuries are deserving of special attention. Add the cases likely to be consigned to other hospitals, or conveyed to the dispensaries, as well as those which fall to private hands, and the whole number whose broken bones are splinted in Chicago daily would give several surgeons exclusive employment. This great field is comparatively neglected. While the most diverse views are taught, a deplorable lack of observation exists among students at large. A minute knowledge of anatomy and pathology is required to observe correctly the phases of a fracture from beginning to end. Few are found to acquire it. It is impossible, therefore, to escape error in the diagnosis and treatment, to say nothing of having the tact and patience so necessary in the management of fractures.

The importance of this branch of surgery demands it. They are all grave injuries, not only in respect to the deformity, the loss of valuable time, and the deterioration of health to the patient on the one hand, but also in respect to the liability of the surgeon on the other. The speediest union, and the least deformity attainable in a given case of fracture, will be had by the practitioner who has brought love of the truth to the study of healthy nutrition and repair.

The hospital furnishes a noble field for clinical study in the direction indicated.

The following is a statement of the fractures admitted during the year ending July 31, 1869, with reference to the time when they occurred, and the part injured:

August — 1 leg.
September — 1 leg, 2 forearm.
October — 1 leg, 1 forearm, 1 arm, 2 jaw, 1 rib.
November — 3 leg.
December — 2 leg, 2 thigh, 1 forearm.
January — 4 leg, 1 patella, 1 arm, 1 rib.
February — 2 leg, 1 patella, 1 clavicle.
March — 1 leg, 1 arm.
April — 1 leg, 1 forearm, 2 rib.
May — 2 leg.
June — 5 leg, 2 arm, 1 scapular, 1 jaw, 1 skull.
July — 1 foot, 4 leg, 3 thigh, 2 clavicle, 1 rib.

The list excludes cases of railroad injury in which death or amputation followed. It will be observed that of 58 cases, 16, or over 27 per cent., took place in the months of December, January and February, while 21, or over 36 per cent., occurred in the months of June and July.

The cases existing in the Hospital, July 31, are enumerated below, with so much of their history as was accessible.

1. Fracture of left humerus at upper end of middle third, March 24, 1869. Admitted June 4. Swedish emigrant, student, aged 26, of good habits. His injury occurred on shipboard, one week before arrival in New York. While walking on the deck of the vessel he slipped and fell. The fracture was dressed rudely. It was redressed and straightened, March 31, in New York. While on his way to Chicago, May 1, he was jostled against the wall, in a crowded car, and his arm refractured. On admission considerable deformity existed. A straight splint was applied, and the case recorded as one of delayed union. The splint was removed June 24, the indications of complete union being satisfactory. Two days later, while the patient was walking out by permission, he fell, and in putting out his hands to save himself, again reproduced the fracture. There was no crepitus, but marked deformity and mobility at the spot affected. A straight splint was reapplied without correcting the deviating bone wholly. He was discharged August 2. Union firm. Period, 129 days.

2. Fracture of right leg, tibia at upper end of middle third, fibula at lower end of middle third, May 14, 1869. Admitted same day. Born in Ireland; laborer; aged 40; of irregular habits. A curb-stone fell over on his side. Injury accompanied by marked deformity. A box splint was used the first three days; but, getting a chance in the night, he kicked it off, allowing the deformity to return. The fracture was readjusted in the morning, and a plaster of paris splint applied. Removed the 42nd day. Good union. Considerable tenderness. Cold douche daily. Limb kept bandaged, and at rest in an elevated position. Shortening one-fourth of an inch. Discharged August 11. Period, 89 days.

3. Fracture of right scapula at neck, June 17. Born in Sweden; farmer; aged 19; habits good. He fell from the back of a mule, in the field, striking with his shoulder. Treatment, support to the arm. Union prompt. A depression under the acromion remained, causing a slight deformity. Discharged the 52nd day.

4. Fracture of right leg, tibia at lower end of middle third, fibula at upper end of middle third, June 18. Admitted same day. Born in Ireland; teamster; aged 23; habits good. In wrestling he was thrown to the ground, the weight of his opponent falling across his leg. Deformity marked. A plaster of paris splint was applied at once, and retained five weeks, when it became uncomfortable and gave place to another for six days. Union then perfect. Shortening one-half an inch. Discharged the 53rd day.

5. Fracture of left superior maxilla-alveoli from second incisor to third molar; completely detached, June 24. Admitted same day. Bohemian; laborer; aged 55; habits good. He fell in a fit on the sidewalk, striking with his face. Displacement downward and inward. Teeth firm. A lacerated and contused wound over left malar bone and down across seat of fracture. No retentive apparatus was used, other than the four-tailed bandage. The external wound cicatriced. Small bits of necrosed bone escaped through the gums about the 21st day. Soon after, an abscess formed and broke over the recent cicatrix. The opening continued to discharge pus. The 37th day there was no union. The fragment was held in place only by mucous membrane. A

probe passed horizontally in at the external opening crossed the antrum, touching carious bone. Removal of the loose portion of the dental arch having been decided upon, the patient went out August 2, to avoid the operation.

6. Fracture of left tibia at lower end of middle third, May 28. Admitted June 9. Born in Michigan; servant girl; aged 28; habits good. She fell down a flight of twelve steps. No deformity save swelling and ecchymosis. Sat up and bathed the part with liniment the first twelve days. On admission a box splint was used for six days, then plaster of paris till the 48th day, when union was perfect. No shortening. Discharged August 4. Period, 68 days.

7. Fracture of left femur, complicated with compound comminuted fracture of left patella, June 29. Admitted same day. German; laborer; aged 21; habits good. He fell from the new city hall, two stories, without obstruction, while carrying a hod of mortar. Contusion of face frightful. Deformity of thigh marked. Patella punctured upon the center of anterior surface, and broken into four pieces. The opening admitted a finger to be passed into the joint. Synovia escaped. A wet compress was kept on the knee, and a weight of eighteen pounds fastened to the leg. There was apparently perfect bony union of the patella at the end of four weeks, without anchylosis. The bone was one and a fourth inches broader, and one inch longer than normal. The femur united readily, with considerable displacement. Shortening one and a fourth inches.

8. Fracture of right leg at middle of middle third, July 1. Admitted same day. German; laborer; aged 22; habits good. Injury caused by his jumping off a wagon which was in rapid motion. Deformity marked, the crest of the lower fragment of the tibia projecting nearly through the integument. It could not be reduced by extension. A plaster of paris splint was used, carefully avoiding compression upon the projecting fragment for fear of ulceration. The first splint was removed the third week. The second was removed August 10. Union perfect. Considerable deformity. Shortening one inch.

9. Fracture of right femur at neck, both within and without capsule, July 2. Admitted same day. Born in England; carpenter; aged 25; habits good. He fell, with scaffolding, twenty-

five feet, striking with his hip across a tool box. Symptoms: Helplessness, slight eversion, crepitation, rotation of trochanter, with a shortened radius; the head felt at rest through the spare gluteal coverings when the trochanter was moved. Three-eighths of an inch shortening. Treatment: A pad was placed beneath the trochanter, and an eighteen pound weight attached to the leg. August 8 the dressing was removed. Union perfect. Shortening slight.

10. Fracture of right clavicle at inner end of outer third, July 3. Admitted July 10. Born in Ireland; an express driver; aged 18; habits defective. Thrown from a wagon, he struck the cobble stones with his shoulder. When admitted he was wearing Hamilton's dressing. Marked deformity existed without mobility. Redressed with adhesive straps. No compress. United readily, with shortening and projection. Discharged August 7. Period, 34 days.

11. Fracture of left eighth and ninth ribs at middle, July 3. Admitted July 16. Born in Ireland; laborer; aged 40; habits good. Fell across a ditch-box. Treatment: support by bandage. Discharged Aug. 2. Period, 30 days.

12. Fracture of right femur two and a half inches above articular surface, complicated with dislocation of condyles into the popliteal space, July 3. Admitted same day. Born in Ireland; peddler; aged 54; habits good. He fell through a trap door in the third story, striking upon the lower floor. Deformity well marked. Chloroform was administered and the dislocation reduced by manipulation and extension, an operation of some difficulty. Systematic extension and counter extension were applied to the leg. Union perfect the 43rd day. Shortening, one-half inch.

13. Fracture of left leg at lower end of middle third, July 10. Admitted July 11. Born in Norway; bricklayer; aged 42; habits good. He broke through a hatchway and fell into the hold of a propeller while carrying his trunk on board. Marked deformity. A plaster of paris splint was used at once. Reapplied the 17th day. Ununited on the 52nd day. Shortening one-half inch.

14. Fracture of left leg at lower end of middle third, July 12. Admitted same day. Born in Ireland; laborer; aged 50; habits

good. He stepped through an old barn floor. A plaster of paris splint was applied for the first dressing. After the gypsum had set, it was found that the bandage was too tight. Removed the second day, on account of pain. Reapplied. Union the 37th day.

15. Fracture of right clavicle at middle of outer third, July 13. Admitted July 15. Born in Ireland; lumberman; aged 23; habits good. He fell from a scaffold, fourteen feet, striking a plank with his shoulders. Dressing by adhesive straps. No apparent deformity. Shortening three-fourths of an inch.

16. Fracture of right leg at lower end of middle third, July 21. Admitted July 22. Born in Ireland; laborer; aged 22; habits good. Received a horse kick. Deformity marked. Left tibia subject of old disease, resulting in hypertrophy; lengthening manifest. A plaster of paris splint was applied to the fractured limb at once. Considerable deformity will remain. The leg bows out, while the sound limb is abnormally straight. Disparity of length, one and three-fourths inches.

17. Fracture of right first metatarsal bone, just back of head, July 21. Admitted July 29. Bohemian emigrant; aged 23; habits good. His foot was caught between the cars. Swelling and ecchymosis. Treatment: cold wet compress. Union the 28th day.

18. Fracture of left leg at upper end of lower third, complicated with deep laceration of the inner side of calf, above and along side of fracture, July 28. Admitted same day. Born in Germany; painter; aged 23; habits good. He fell under a street car in motion. Two wheels passed over him. The first produced the fracture, the second the flesh wounds. Considerable contusion of the outer aspect of the calf. Deformity marked. The limb was extended and a support of plaster of Paris fitted to exclude the laceration. This was removed the third day on account of inflammation, and a poultice of flaxseed applied, the limb resting on a pillow. On the twelfth day, sloughs had separated, leaving deep cavities in place of the lacerations. Discharges copious from exuberant granulations. Cerate dressing used. The swelling of the foot disappeared. He emaciated rapidly, settling down in bed. On the 19th day he had a chill; pulse rose to 114; considerable uneasiness; imperfect sleep; tongue coated, thin, white; tenderness over abdomen; tym-

panites. His fever continued; emaciation progressed; the wounds discharged unhealthy pus; the loss of tissue extended, the integument becoming undermined and melting away at the margin of the wounds. Communication with the bone to a wide extent became evident. He sank lower in bed. Profuse perspiration bathed his body through the day. At night he slept, under the use of morphia. He complained very little. At length all strength failed. The ulcers grew black and gangrenous, and he died on the 32nd day.

19. Fracture of left temporal bone at upper part of temporal ridge; compound; June 21. Admitted same day. Born in Ireland; soldier; aged 31; habits intemperate. Received a horse-kick, the toe calk penetrating the skull. Opening through the integument $1\frac{1}{4}$ inches long; through bone $\frac{1}{2}$ inch long. Small spiculæ picked out. Duramater unbroken. Ice was applied at once. On the 25th day meningeal inflammations appeared. Treatment: veratrum viride and belladonna. The wound closed rapidly. He went out the 34th day, at his own request. Getting on a spree, he returned in two days with a smart attack of erysipelas. Met by the tincture of chloride of iron.

Of this group of cases, No. 1 is remarkable as illustrative of frequent causes of delayed union, namely: anæmia, insalubrity of emigrant traveling, mental dejection added to disturbance at the seat of fracture by want of care in handling. No. 2 may show the effect of too much handling, in the irritability remaining. No. 3 is a rare case. No. 7 is an example of unmistakable bony union in a comminuted compound fracture of the patella. So considerable a shortening of the femur would admit of close approximation in spite of the tonic contraction of the extensor muscle. No. 9 presented a case of difficult diagnosis as well as rarity. No. 12 is remarkable on account of the complication and the excellent result obtained, as in No. 16, on account of the unhappy dissimilarity of his legs. No. 18 is one of those cases which are rare upon the whole, yet deplorably frequent in respect to their forcible admonitions and inevitable result.

Case 1. — *Abdominal Hæmorrhage.* — L. S., a German woman, small, aged 43, had been an inmate since June 19, 1868, for chronic hypertrophy of the womb, accompanied by retrover-

sion, cervicitis, and ulceration, giving a history of instrumental delivery, frequent confinements, and hard work at service. For sixteen years, she was complaining not bearing children, having all the symptoms commonly present in such cases, culminating in hysteria. For a time after her admission, treatment was unavailing. Finally, about four weeks previous to her death, Dr. Jones amputated the anterior lip of the cervix. The cut surface was tough and fibrous, having a lateral diameter of one inch; vertical diameter, three-fourths of an inch. Her condition, after the operation, was generally improved; her menses came on at the regular period, instead of within it, as before, and continued for the usual time; the hæmorrhage from this source was excessive; however, controlled by gallic acid. Two days previous to the occurrence we are to describe, it had ceased altogether, and her condition seemed to promise a cure. The wound of the operation was at this time nearly healed. August 16, 1869, she was waked, at 2 o'clock in the morning, by profound pain in the abdomen, referred to the hypogastrium. She remained on her back through the day, in a state of complete collapse. Pain was controlled by opiate enemata. In twenty-four hours she died. *Autopsy thirty-six hours after death.*—Rigor mortis; considererable layer of fat beneath the integuments; atrophy of mammary glands; transverse colon black and distended; dark fluid escaping from the cavity of the abdomen, containing grumous particles. A pint of this fluid was taken out by sponges. The colon contained a pint and a half of the same liquid; the meso-colon was widely and generally infiltrated with extravasated blood, presenting a surface of coagulum, when the sub-peritoneal connective tissue was cut. The liver and spleen were both devoid of blood; the uterus was normal in size, deviating slightly to the left side; the cervix was indurated and hypertrophied; the ovaries were atrophied, containing many cysts of small size; deviations and adhesions of the Fallopian tubes existed on both sides. No signs of inflammation of the pelvis, the extravasated matter in the abdomen being confined to the hollows on either side of the spinal column. The real lesion was not discovered. The blood was found extravasated. There was room for speculation as to its origin.

Case 2. — *Apoplectic Aphasia.* — P. N., aged 55, born in Ireland, a laborer, was admitted July 1, 1869. No previous history of his case exists save a single statement to the effect that some time before his admission, he fell, suddenly, and lay for awhile insensible. He was partially paralyzed on admission, and dumb, though he understood. Paralysis of the sphincters was total; the right side was nearly helpless, the left enjoyed greater freedom. His face and larynx were not affected; his inability to speak was evidently of another sort. He had double cataract. His intelligence gradually failed, and he lay, finally, for several weeks, in a state of complete lethargy. Toward the last, he had slight tonic convulsions; on the sixth day they were repeated with greater violence; on the seventh day, August 25, he died.

Autopsy twelve hours after death. — Strong adhesions of the thickened duramater; about half a pint of serous fluid was found within the cranium. When the brain was inverted and lay upon its upper surface, the left anterior lobe seemed retracted; a distinct sense of fluctuation was obtained. On opening the lobe, it was found generally softened, containing, in the centre, a circumscribed pultaceous mass, the size of a walnut. The basilar artery was nearly occluded; its walls pearly and cartilaginous in texture. The same condition was found more or less extensive in the cerebral arteries of either side. The spinal cord was normal. No further examination took place. There can be little doubt as to the origin of the aphasia.

Case 3. — *Diffused Aneurism of the Aorta.*—J. L., aged 33, born in Ireland, sixteen years in this country, a farmer of previously sound constitution, was admitted August 16, 1869, and the case recorded as malarial cachexia. In the fall of 1868, he left a farm in central Illinois, to work on the Union Pacific railroad. In February, 1869, he had several chills, for which he took quinine. In March, he quit work altogether, owing to pain between his hips. It was not constant. He had an uncomfortable bed and bad food, and consequently referred his pain to the exposure he endured. He had fever all the time, but no sweating or pain, other than that mentioned, which was worse in the morning. He continued to suffer from fever, loss of appetite, thirst, costiveness, and weak digestion; being able to eat only a little rice.

He rapidly emaciated. After arriving in Chicago, March 18, he gained, but as soon as the weather became warm he again declined. He complained of sweats, a dirty tongue, constipation, and great pain in making water — involving the left inguinal region — it seemed as if it would kill him. His urine contained considerable offensive sediment; the pain in his back grew in severity, affecting him most in the morning, and especially whenever he took a drink of water or tea; operations of oil, which he took to move his bowels, sometimes gave great pain in the left inguinal region; his testicles retracted — he had gonnorhœa the year before. On admission he was greatly emaciated; tenderness and tumefaction beginning over the spleen, extended into the inguinal region. Toward the last he had retention of urine. He sank under gradual aggravation of all the symptoms until August 29, when he died.

Autopsy twenty-four hours after death. — On opening the abdomen, dark, red discoloration marked the surface of the small intestines; the omentum was black, and adherent to parts in contact with it; black infiltration was general within the sub-peritoneal connective tissue in the walls of the entire hypogastric, left inguinal, and left lumbar regions. A huge oval mass filled the space described, limited only by the walls of the abdomen and the spinal column, extending upward to the diaphragm, and below to the cavity of the pelvis covered by the peritoneum of the lateral and posterior parietes. The hand readily broke into the tumor; the central portion consisted of a coagulum. On turning this out, sheets of fibrine, beautifully laminated, peeled up, having a deeply-rippled surface from four to six inches in diameter; layer after layer of this substance came to view, growing tougher and paler toward the bottom. The base of the tumor was found in front of the second and third lumbar vertebræ. The bodies of these bones were bare, and eaten away on either side to the depth of half an inch. A smaller division of the sack existed to the right of the column, furnishing the same proportion of fibrine and coagulum. The liver appeared about normal; the spleen was small and crowded up; the intestines were empty and crowded up to the right side; the bladder was distended; the left kidney was elongated, and its pelvis filled with urine. Owing to a somewhat unguarded dissection of the tumor, its exact origin was

not made out. The aorta seemed normal immediately above and below the eroded vertebræ. The mouth of the aneurism was not found. The central coagulum, fibrinous, stratified walls, and wide extravasation, proved incontestibly the nature of the case.

Case 4. — *Rupture of Aortic Semi-lunar Valves.* — J. C., colored, aged 56, a roistabout, was admitted August 28. Two weeks previously, he had felt a sharp pain, with a sensation of something giving way, about his heart. He was at the time, with others, lifting a heavy piece of machinery, the whole strain of which came upon him. Immediately after this exertion, he felt difficulty in breathing. On admission, dyspnœa was marked ; a blowing sound was heard over the base of the heart. Two days later he died suddenly, after rising up in bed to receive a drink of water he sank back and expired.

Autopsy.—The heart was small and rather flabby ; its ventricles were full of fibrine adhering closely to the walls ; two of the aortic valves were ruptured ; two large, irregular rents, whose united calibre was almost equal to that of the vessel, existed in the membrane of each ; the borders were intact. The apparatus was thus rendered totally insufficient. Considerable attenuation of the remaining valve, amounting to atrophy is observable. The lungs were œdematous. No other lesion was demonstrated.

Article II. — *St. Luke's Hospital*, under the care of Jno. E. Owens, M.D.

A Case of Pertussis. — May J. ; aged 6 years ; admitted June 30, 1869, five weeks previous to which, according to the mother's account, she was attacked with pertussis. How long she had had the characteristic cough is unknown ; but, upon admission, it was pathognomonic. The paroxysms, which were more frequent at night, occasioned a regurgitation of almost every thing that was eaten. Before instituting any treatment in this disease, one must ascertain not only the degree of violence of the paroxysms, but also their number during twenty-four hours, or during any stated period of sufficient length. In order to determine the latter, we have adopted the suggestion of Trousseau, of sticking a pin-hole in a card for every paroxysm. Since, during

the night, more or less of the paroxysms would be lost, the nurse was instructed to count from 6 A.M. to 10 P.M. The accompanying table — an exact copy of the dated card — gives the number of paroxysms during this period of the day, except the first record, the admission day, which was counted from 11 A.M. to 10 P.M.:

June 30, 1869, 28 paroxysms; July 1, 1869, 26; July 2, 1869, 15; July 3, 1869, 18; July 4, 1869, 15; July 5, 1869, 15; July 6, 1869, 13; July 7, 1869, 10; July 8, 1869, 10; July 9, 1869, 11; July 10, 1869, 8; July 11, 1869, 9; July 12, 1869, 6; July 13, 1869, 8; July 14, 1869, 3.

The patient was put upon the following treatment, July 2nd: Atropia sulph. gr. $\frac{1}{150}$, aqua f℥ ij. S. To be given each morning, fasting. This dose was continued till July 7th, when an additional drachm was administered.

July 6th, about an ounce, only, of dark, offensive urine passed. From this date to the 8th, at two P.M., there was almost an entire suppression, except the occasional passage of a drachm, probably, during a paroxysm.

The patient took no atropia after the 7th. Sweet spirits nitre was given every two hours during the day (7th). Its exhibition was followed by a copious diaphoresis, but the medicine had no effect upon the kidneys. The perspiration imparted to the clothing a strong, urinous smell. The nitre, however, produced vomiting towards evening, when elaterium, gr. $\frac{1}{20}$, (Clutterbuck,) was ordered every two hours. Six doses were administered without effect, when the dose was doubled, which was followed by watery discharges, with a pretty free secretion of urine. During the suppression there was an absolute freedom from pain; neither was there drowsiness, or dryness of the throat. Ever since the exhibition of atropia, the pupils have been moderately dilated, and when it was discontinued the dilatation passed away, to some extent, but temporarily, for two or three times since the 7th the dilatation became excessive, and vision, in a degree, interfered with.

July 19. — The cough, occasionally, has spasmodic quality, but it recurs so seldom that the case seems to require no further treatment. She goes out to-day, feeling very well.

Hooping-cough, although a disease requiring very careful treat-

ment, in many cases, is an affection for which almost every old woman has her specific. In speaking of what seems to be a very successful mode of treatment, I can not do better than quote the words of the lamented Trousseau: "The active principle of solonaceous plants influences neuroses only when given in sufficiently large doses, and this influence lasts for some time; but lest the therapeutic effects should be greater than desired, the medicine should first be given in doses which are probably less than those needed for exerting a favorable action on the disease; these doses must be gradually increased until therapeutic effects begin to show themselves. As soon as this result is obtained, it is generally sufficient to continue the same daily dose, in order to increase the good effect produced. If the dose which has brought on these good results, were increased hastily, with the view of accelerating the cure, and especially if it were repeated on the same day, one might, at first, wonder at the success obtained; but unpleasant dryness of the fauces, and some disturbance of vision, which increases rapidly, would soon render a diminution of the dose necessary, and the consequence of this would be to allow the disease to reproduce itself, and to escape the influence of the mode of treatment."

The case involves several points of interest, viz.:

The marked influence which the drug seemed to possess, of lessening both the number and violence of the paroxysms; the suppression of urine — probably the effect of atropia; the efficiency of elaterium in re-establishing the renal secretion, in addition to its action upon the bowels; the copious perspiration, which imparted a urinous smell to the clothing, and which depurated the blood to a great extent, thereby protecting the nervous system; lastly, the excessive dilatation of the pupils, which occurred a number of times from the 7th to the 11th, seems to prove that the influence exerted by the salt, and possibly by solanaceous plants in general, lasts for some time, and we are justified in concluding that inasmuch as its physiological manifestation could be seen during this time, it was likewise making itself felt upon the neurosis.

112 *Randolph Street.*

Editor's Book Table.

[Note.—All works reviewed in the columns of The Chicago Medical Journal may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of medical books will be seen in the present number.]

A Treatise on the Diseases and Surgery of the Mouth, Jaws, and Associate Parts. By James E. Garretson, M.D., D.D.S., late lecturer on Anatomy and Surgery in the Philadelphia School of Anatomy; late Prof. of the Principles and Practice of Surgery in the Philadelphia Dental College, etc., etc. Illustrated with steel plates and numerous wood cuts. Philadelphia: J. B. Lippincott & Co., 1869. Pp. 700. $7.50. Chicago: W. B. Keen & Cooke.

A glance at the headings of the forty-two chapters of this work will abundantly convince the reader of the great importance of the several subjects treated, and reading of the text will demonstrate that the author has accomplished the task proposed with consummate ability and fidelity. No dental surgeon can consider his library complete, or himself fully "posted," without this invaluable book. It is the most scholarly and at the same time practical exposition of the general subjects treated upon, that it has been our fortune in a long time to meet, even if it has ever been equaled. But it is by no means to be restricted in use and value to our *confreres*, the dentists. Aside from its discussion of the pathology and therapeutics of the teeth, about two-thirds of the space is devoted to elucidation of disorders topographically associated, and here the most accomplished surgeon will find much to interest and instruct. We are especially pleased with the multitudinous new and beautiful illustrations afforded. We do not hesitate to say that in this respect the book equals, if it does not surpass, any professional book up to this time issued from the American press. It affords us unusual pleasure to advise each of our readers to buy, read and rejoice over this really *new* book. We congratulate the author upon its undoubted immediate popularity and success.

A Course of Practical Chemistry, Arranged for the Use of Medical Students. By WILLIAM ODLING, M.B., F.R.S., Lecturer on Chemistry at St. Bartholomew's Hospital, etc. With Illustrations. From the fourth and revised London edition. Philadelphia: Henry C. Lea, 1869. Pp. 261. $2. Chicago: W. B. Keen & Cooke.

A CONVENIENT hand-book for the student, and for reference by the practitioner. It is well illustrated. In the present edition the new system of atomic weights and formulæ is employed, but no general changes in the nomenclature have been introduced.

Electricity in its Relations to Practical Medicine. By Dr. MORITZ MEYER, Royal Counselor of Health, etc. Translated from the third German edition, with notes and additions, by WILLIAM A. HAMMOND, M.D., late Surgeon-General U. S. A., Professor of Diseases of the Mind and Nervous System, and of Clinical Medicine in Bellevue Hospital, Medical College, etc., etc. New York: D. Appleton & Company, 1869. Pp. 497. $4.50. Chicago: W. B. Keen & Cooke.

THE fact that Prof. Hammond has deemed this treatise sufficiently meritorious to induce him personally to translate and annotate it, is a good indication of its intrinsic value. He states emphatically, in his prefatory note, that it is the best which has yet appeared on the subject. The profession is certainly to be congratulated on the acquisition of further light on matters which have heretofore been largely exiled to the domains of professsed quackery.

A Text-Book of Practical Medicine, with particular reference to Physiology and Pathological Anatomy. By Dr. FELIX VON NIEMEYER, Professor of Pathology and Therapeutics, Director of the Medical Clinic of the University of Tübingen. Translated from the seventh German edition, by special permission of the author, by George H. Humphreys, M.D., etc., and Charles E. Hackley, M.D., etc., (New York City.) New York: D. Appleton & Company, 1869. In two vols. Pp. 731 and 770. Cloth, $9. Sheep, $15.00. Chicago: W. B. Keen & Cooke.

THE fact that *seven* editions of Prof. Niemeyer's book were called for within ten years, and it had received the further

indorsement of translation into most of the principal languages of modern Europe, encouraged the American translators in the belief that it would prove acceptable to readers in this country. The last German edition had been thoroughly revised and enriched by copious additions. Although numerous text-books upon practice exist in the English language, yet, as for many of the most important researches and discoveries, both in pathology and therapeutics, we are indebted to Germany, and the concise and well-digested epitome of the results of ten years of carefully recorded clinical observations by the most illustrious medical authorities of Europe, together with many valuable and practical deductions regarding the cause of disease, and application of remedies, presented in these volumes, can scarcely elsewhere be found assembled in any single work; therefore we agree with the worthy translators in the fitness of the task which they have faithfully accomplished.

Prof. Niemeyer boldly announces himself as a defender of empirical therapeusis. Although himself a brilliant and profound pathologist, he declares "that even the dazzling progress which pathology has made has been but of little use in therapeutics; that in spite of new discoveries, our present success at the bedside is scarcely more favorable than that of fifty years ago."

Nevertheless, it is easy to see that, notwithstanding this somewhat gloomy and discouraging view of affairs, the author is far more of an optimist than he is willing to admit, and his treatise proves the fact. It takes time for even the keenest observers, and the sturdiest students, to arrive at this foundation fact, that medical science is thus far perfecting mainly by exclusion of the false and inane rather than by accretion of the new. We are learning not so much a new therapeusis as excision from the old. "Truth advances only over ruins, yet unceasingly advances."

As an evidence of the proposition that the author's real sentiments are not expressed in the *pessimist* remark first quoted, we adduce this better view:

"My conviction is, that from the present state of knowledge, from our deeper insight into the origin and relation of symptoms from the improved accessories, by means of which we are now enabled to follow the various phases and modifications of disease,

the prospect of obtaining sure and authentic therapeutic facts, by dint of accurate comparison of results, is not only by no means unfavorable, but, judging from present experience, is positively certain."

We do not find in this treatise any traces of the bold empiricism we might apprehend from some parts of the preface. But the strength of the book lies in its pathology, and its clear association of existent symptoms with existent lesions. There is a cheering absence of *twaddle* about "functional" diseases. We prize the work as a whole, and cordially commend its careful perusal.

The Mechanism of Dislocation and Fracture of the Hip, with the Reduction of the Dislocations by the Flexion Method. By Henry J. Bigelow, M.D., Professor of Surgery and Clinical Surgery in the Medical School of Harvard University; Surgeon of the Massachusetts General Hospital, etc., etc. With Illustrations. Philadelphia: Henry C. Lea, 1869. Pp. 150. $2.50. Chicago: W. B. Keen & Cooke.

This is a luminous exposition of the subject named in the title, put before the profession, by the publisher, in elegant style, both of paper and typography, with excellent illustrations. No writer could ask for a better dress in which to make a public appearance.

As suggested by the title, this is a scientific account of the successful treatment of dislocations and fractures of the hip, first, so far as we are aware, empirically practiced by the late venerable Nathan Smith; certainly as far back as 1815, and, possibly, earlier still, and more recently recalled to professional attention by Dr. Reid, of Rochester, New York. The father of the present writer was a private student of Prof. Smith during his connection with Dartmouth College, and the writer was instructed by him, in Prof. Smith's empirical method, at least eight or ten years before Dr. Reid's paper was read before the State Society of New York. So much for priority in the method.

To those who only wish to familiarize themselves with the principles and the method, we can refer Prof. Bigelow's essay as complete and entirely satisfactory. But in our sphere as journal-

ists we are compelled to complain of the author as unfair to an unwarrantable extent in passing over, with slight notice, an essay which in every particular anticipates the explanations he affords. We allude to an essay which can not have escaped his notice, because on page 14 of his book he expressly refers to it. Although it has not escaped his notice that PROFESSOR GUNN, in 1853, published in pamphlet form a full account of the mechanism involved, it would appear that he did not read it very carefully, or he would not have stated, as he does on his page 14, that "Prof. Gunn maintains, in a paper upon this subject, that any untorn or 'undissected' portion of the capsular ligament is capable of producing the signs of hip and shoulder luxation." The fact is that Prof. Gunn expressly specifies the *anterior* and *inferior* portion of the capsular ligament, that part which Prof. Bigelow dignifies by the new name, the **Y** ligament. So far as we are able to see, this author has added nothing to Prof. Gunn's exposition of the subject, save only this new name of that portion of the capsular ligament — the *anterior* and *inferior* — heretofore known as the *ilio-femoral*, but which he christens as the **Y** ligament. In the subsequent editions, to which this little work, from its intrinsic merits, will assuredly pass, we trust Prof. Bigelow will do himself the honor, and Prof. Gunn the justice, to set this matter right before his readers.

The Science and Art of Surgery. Being a Treatise on Surgical Injuries, Diseases and Operations. By JOHN ERICHSEN, Senior Surgeon to University College Hospital, etc., etc. From the fifth enlarged and carefully revised London edition. Illustrated with six hundred and thirty engravings on wood. With additions by JOHN ASHHURST, Jr., A.M., M.D., Vice-President of the Philadelphia Pathological Society, etc., etc. Philadelphia: Henry C. Lea, 1869. Cloth $7.50, sheep $8.50. Pp. 1,228. Chicago: W. B. Keen & Cooke.

THIS is a superb edition of a work which is now classical and standard. It is unnecessary to say that it is pre-eminent among all works on the subject. Comprehensive as were the previous editions, the present one has been greatly enlarged, and with the judicious and valuable additions of the American editor, constitutes in itself a sufficient encyclopædia of surgical science and

art. It has been remodeled and whole chapters rewritten. Many of the old wood-cuts have been withdrawn, and nearly a hundred new ones of greater value introduced. Not the least valuable part of the book is the copious index, which enables the busy practitioner to refer at a glance to the subject which he wishes to examine.

Third Annual Report of the Metropolitan Board of Health of the State of New York, 1868. Albany: Printing House of Charles Van Benthuysen & Sons. Pp. 635.

This Report is one of the most valuable contributions to sanitary science. It illustrates the liberality and wisdom of the great State of New York in a manner which we should like to see imitated in the great States of the Northwest. In addition to the usual matters of such reports, it contains an exhaustive examination of the "Cattle Disease," "Texas Fever," etc., which has caused such great anxiety during a few years past. The lesions taking place are finely illustrated by a large number of splendid chromo lithographs.

A Guide Book to Florida and the South, for Tourists, Invalids and Emigrants. With a Map of the St. John River. By Daniel G. Brinton, A.M., M.D. Philadelphia: George Maclean, 719 Sansom Street, 1869. Pp. 136. $1.

For those contemplating a sojourn in the South during the cold season, this little book will be found to contain many useful details, as to preparation for the journey, what to take along, routes, hotels, prices, etc., etc.

Circular No. 2. War Department, Surgeon-General's Office, Washington, January 2, 1869. A Report on Excisions of the Head of the Femur. for Gun-Shot Injury. Washington: Government Printing Office.

The Medical Department of the Army, through its most efficient officers, is making contributions to our profession unprecedentedly rich. Circular No. 2 is a report on the subject named in the title, by Assistant-Surgeon George A. Otis, who introduces his work with a full history of the operation.

He then gives, first, a detailed account of the sixty-three excis-

ions of "the head, or of the head, neck, and trochanters," which are all that are sufficiently authenticated, in all particulars, "to make them available for statistical purposes." Then follows a brief notice of the "rejected cases." "Of the sixty-three operations, forty-eight were performed by Union, and fifteen by Confederate surgeons."

The cases are divided into primary, intermediate and secondary operations, a division the importance of which will be recognized by every surgeon of experience. Primary operations were thirty-two; intermediate, twenty-two; and secondary, nine in number.

The primary operations were all made within twenty-four hours of the reception of the injury. Two were successful. Mean duration of life in the thirty unsuccessful cases, was "a little over seven days." One patient struggled out sixty days, which materially increases the average.

The intermediate operations were made between the completion of the second and the twenty-eighth days after the injury. Two of these were successful. Average duration of life in the unsuccessful cases, was twelve and a half days.

Of the secondary operations, one was successful. Mean duration of life in the eight unsuccessful cases was sixteen days, while one poor fellow held out one hundred days.

The interval of time which elapsed between the reception of the injury and the operation averaged two and a half months.

Seventy pages of the report are devoted to a consideration of the subject of "excisions at the hip, compared with temporization," in which the reporter says: "Expectant treatment is to be condemned in all cases in which the diagnosis of direct injury to the articulation can be clearly established."

Pamphlets.

Advice on the Uses and Abuses of Spectacles and Weak Sight. By Dr. JOHN PHILLIPPS. Pp. 94. Published by the author, 168 Clark Street, Chicago. Price, twenty-five cents.

A USEFUL monograph on the subject, illustrated by wood-cuts, and containing valuable hints to persons with impaired sight.

On External Perineal Urethrotomy; or, an Improved Method of External Division of the Urethra in Perineo, for the Relief of Obstinate Stricture. With remarks on the preparatory and after treatment. By J. W. S. Gouley, M.D., Professor, etc., University of New York, Surgeon to Bellevue Hospital. D. Appleton & Co., New York. From the author.

The Annals of Iowa. Published quarterly by the State Historical Society, at Iowa City. July, 1869. Edited by Sanford W. Huff, M.D., Corresponding Secretary.

Transactions of the Medical Association of the State of Alabama. Annual Session, 1869, at Mobile, with proceedings of the meeting held for reorganization, at Selma, March, 1868.

Hygiene in its Relations to Therapeusis. A paper read before the New York Journal Association by Alfred L. Carroll, M.D.

Transactions of the Indiana State Medical Society, at its Nineteenth Annual Session, held at Indianapolis, May, 1869.

Fœticide, or Criminal Abortion. A lecture introductory to the course on Obstetrics and Diseases of Women and Children, University of Pennsylvania. Session 1839–40. By Hugh L. Hodge, M.D. Philadelphia: Lindsay & Blakiston, 1869. Chicago: W. B. Keen & Cooke. Paper 30c., cloth 50c.

Carbolic Acid — Its Action and Uses. By Charles F. J. Lehlbach, M.D., of Newark, New Jersey. Reprinted from the transactions of the Medical Society of New Jersey, 1869.

Surgery of the Cervix, in connection with the treatment of certain Uterine Diseases. By Thomas Addis Emmet, M.D. Read before the Medical Society of the County of New York, February, 1869. From the author.

Catalogue of the Graduates of Jefferson Medical College, of Philadelphia, 1826—1869. Ledger Job Printing Office.

Transactions of the Medical Society of the State of Pennsylvania, at its Twentieth Annual Session, held at Erie, June, 1869. Fifth series. Part Second. Pp. 567.

Myxoma, or Hyperplasia of the Villi of the Chorion. By Alexander Sinclair, M.D., etc. Boston: David Clapp & Son, 334 Washington Street. 1869. From the author.

Puerperal Eclampsia. By C. C. F. Gay, M.D. Buffalo, August, 1869. From the author.

The Half-Yearly Abstracts of the Medical Sciences. Being a Digest of British and Continental Medicines, and of the Progress of Medicine and the Collateral Sciences. Vol. XLIX. July, 1869. Philadelphia: Henry C. Lea, 1869. Pp. 293. $2.50 per annum, in advance. Single copies, $1.50.

Half-Yearly Compendium of Medical Sciences. Part IV. July, 1869. Pp. 321. Philadelphia: S. W. Butler, M.D., 115 South Seventeenth Street. $3 per annum, in advance. Single numbers, $2. For 1868 and 1869, Nos. 1 to 4, inclusive, $5.

The Physician's Visiting List for 1870. Nineteenth year of its publication. Philadelphia: Lindsay & Blakiston. Chicago: W. B. Keen & Cooke.

Foreign Items.

Baron Larry, in his important work on Trephining, in traumatic lesions of the skull (published by Victor Masson & Co., Paris), thus summarizes the indications and contra-indications for this operation.

Indications.—Trephining should be practiced in traumatic lesions of the head, if symptoms, clearly localized and circumscribed, persist, and if all other means are unavailing, in the following cases:

1st. In fractures of the vault, by perforation or with imbedding of the fragments, whenever the injury to deep-seated parts occasions grave and continuous consequences, whilst remedial measures other than trephining may be impossible or inefficacious.

2nd. In fractures complicated with the perforation of foreign bodies of the thickness of the cranium, or with penetration into the superficial layers of the brain with persistence of symptomatic accidents, if the extraction of the foreign body can be effected in no other way.

3rd. In the different mechanical lesions of the head, complicated with grave and persistent cerebral symptoms, such as contusion and compression of the brain, or even prolonged hemiplegia with extravasation of blood or of pus, considered as circumscribed, provided that the lesion can be localized, and provided, especially, that active therapeutics remain insufficient.

Contra-Indications.—Trephining should not be attempted in cases of lesion speedily or necessarily fatal, nor in those presumed to be curable by other means.

1st. When a foreign substance, lost in the deep portions of the brain, has passed beyond the reach of instruments.

2nd. If blood or pus, extravasated within the cranium, does not appear to form a focus in relation with the opening in the bone.

3rd. In every case of fracture not complicated with firm imbedding of the fragments, nor with prolonged phenomena of compression or paralysis.

4th. In the condition of cerebral commotion or coma, with or without localized lesions.

5th. In indeterminate or epileptiform convulsions, not persistent and susceptible of cure.

6th. In diffuse inflammation of the brain or its membranes, when clearly appreciable.—*Gazette des Hopitaux.*

On Thursday, August 19, M. Bailly, in the course of a clinical lecture upon a case of very profuse uterine hæmorrhage supervening in the seventh month of pregnancy, assigned for metrorrhagia in pregnant women, the following causes.

The first, and beyond doubt much the most frequent cause

during the last months of pregnancy, is the "*vicious*" insertion of the placenta into the uterine neck.

The second, is the rupture of the utero-placental vessels (the insertion of the placenta being normal) under the influence of a congestive molimen.

The third source of this phenomenon the lecturer locates in the vessels of the mucous surface of the uterus, apart from the placenta, which ordinarily but slightly developed, may occasionally, under the menstrual impulse, give origin to a flow of blood.

These three sorts of hæmorrhage all originate within the body of the uterus. The remainder pertain to the neck, and of these, the first results from cancerous disease located in the neck, which becomes predisposed to hæmorrhage by reason of the access of blood to the uterus induced by pregnancy. These hæmorrhages occur most frequently during the latter period of pregnancy, for the reasons applicable to cases of placenta prævia.

But again, aside from any cancerous, syphilitic or other malignant disease, the mucous surface of the uterine neck, during pregnancy, sometimes becomes granular, and these granulations becoming fungous and very vascular, bleed at the slightest touch, and they are, moreover, peculiarly sensitive at the menstrual epoch. Several examples of this sort have even been known to occur at the first menstrual period subsequent to the removal of the ovaries of the body, and even of the supra-vaginal portion of the neck of the uterus. This form of hæmorrhage is frequently, although not invariably, indicative of pre-existing disease of the cervix.—*Gazette des Hopitaux.*

M. Good thus tabulates the statistics of 112 coxo-femoral resections performed subsequent to 1860:

Of the 112 cases, 52 (or 46.43 per cent.) were successful and 60 (or 53.57 per cent.) fatal. In relation to the nationalities, the cases are arranged as follows:

In Germany, 34 operations, 12 (35.29 per cent.) successful.

In England, 32 operations, 21 (95.62 per cent.) successful.

In America, 29 operations, 16 (55.17 per cent.) successful.

In France, 14 operations, and only 2 (those of MM. Sédillot & Backel, a Strasbourg) successful.

In Russia, 3 operations, 1 successful.

Of the 52 cures, 19 walked without support, and 9 with a simple cane. M. Good compares with these the results of the expectant treatment at the Hospital St. Eugenie (Paris), of 12 cases of suppurating coxalgia. One only resulted in spontaneous recovery, three remained stationary during several years, and eight died.—*Gazette des Hopitaux.*

M. Liebreich has communicated to the Academy of Sciences (Paris) three experiments made to test the anæsthetic and soporific properties of chloral. terchloride of aldheyde. The first, a hypodermic injection of one 1.57 gramme, in the case of an insane epileptic troubled with hallucinations and wakefulness. Five minutes afterwards the patient fell into a deep sleep, which continued four hours and a half. The two other experiments were made in the Charity Hospital, Berlin, under the direction of Professor Bardeleben. The first of these was followed by deep sleep, of several hours duration. The second was marked by decided anæsthesia, the particulars of which are detailed.

A case of metrorrhagia, of more than one month's duration, has been successfully treated, at the Necker Hospital, under the direction of M. Potain, by hot baths. There was no lesion of the uterus, and only a slight enlargement of the neck.

M. Bourdon, at la Charité, has succeeded in preventing the pitting of small-pox, by covering the face with cerate and sprinkling this thickly with starch, so as to form a paste.

Apropos to the discussion upon animal vaccination, M. Herard has made a comparative study of animal and Jennerian (human) vaccination, in four hundred and ninety-three new-born infants, and has been unable to detect any difference whatever between the effects of the two varieties of virus. They were identical.

Editorial.

Change of Publisher.

It is with the most pleasurable sense of relief, and high anticipation for the future, that the Senior Editor and Proprietor of this Journal announces that he has enlisted the widely-known Publishing House of W. B. Keen & Cooke in its publication. His own personal and professional engagements have been such that it was simply impossible for him to satisfactorily, or even unsatisfactorily, attend to the varied business of publisher, and devote any time whatever to editorial duties. A concurrence of circumstances, easily surmised, unnecessary here to be repeated, placed the Proprietor in such a position that he must either abandon the editorial chair for the publisher's ledger and desk, or else withdraw wholly from any connection with the Journal. In this dilemma he sought a real and not as heretofore a nominal rescue from the business management in once more changing publishers.

It is not at all necessary to introduce Messrs. Keen & Cooke to our readers. They have the capital, the facilities and the enterprise which would make the Journal an assured success almost without editorial management.

Thus relieved from the cramping cares of pecuniary business, (which, above all existing things, we intensely abominate,) we turn with something like glee to the pleasant task of chronicling the advance of medical science and art. To that task, solely, we shall lend our best energies. We shall herein air neither our private griefs nor those of others. We shall grind the axes of no man or set of men. We shall ignore all quarrels about the "code," and shall seek to "elevate the profession," simply by recording what it is doing and finding out.

This number will go to many who have not as yet been subscribers. We trust they will send their subscriptions to the Publishers, and the ripe results of their knowledge to the Editors.

J. A. A.

Watermelon in Dysentery.

Cucumbers have always had a bad reputation in "bowel complaints," and watermelons, cantelopes, etc., have been almost equally liable to criticism. But recent correspondents of the

Boston Medical and Surgical Journal boldly report cases of recovery after ingestion of these much-abused vegetables. Whereupon the witty editor of the *New York Medical Gazette* writes: "If this sort of thing goes on, we shall expect good results from a diet of fried pork, lobster salad, and hot plum-cake in enteric troubles generally." To which, in all seriousness, we reply, worse treatment has happened. In the late war many of the most obstinate "enteric" cases recovered rapidly when allowed unrestricted indulgence of their appetites in the cook-room. Raw onions, turnips, carrots, green corn, and half-ripe fruits, even, were often found salutary to the soldiery. If it is objected that the vegetable diet was better borne on account of the scorbutic diathesis usually present in these cases, we reply, scorbutus is but a name, and a similar condition is often produced in civil life by mistaken habits based on mistaken physiological notions. Nothing is more frequently met than the wonder of patients, or their parents, that they should have diarrhœas or dysenteries when they have so carefully abstained from "fruits and green things." During epidemics of cholera, diarrhœa or dysentery, this scrupulous caution is more likely to be carried to excess, and our experience is that the most cautious are the first to fall victims. In the progress of many long-continued diseases the system is liable to fall into similar impoverishment, from careful exclusion, from the diet table, of what are really essential ingredients.

We trust not to be misapprehended, for it is unquestionably true that when the digestive organs have not been habituated to the use of any particular kind of food, they are likely to be intolerant of it. But this no more proves that they are not needed by the system, than the fact that a starving man can not be at once permitted to satisfy his appetite, without extreme danger, proves that food is in itself injurious to him.

It is exceedingly difficult to overcome this *fruit-and-vegetable-phobia*, on the part of both physicians and patients. The simple fact is, without resorting to any very gross humoralism, a large number of these cases are caused by an effort at elimination, by the intestinal mucous-membrane, of effete and poisonous matters which the kidneys fail to excrete. These much maligned vegetables furnish pabulum to the blood, and stimuli to the kidneys, very often beyond the power of any so-called medicine to imitate.

The watermelon and cucumber cures need astonish no one. The great trouble is, we shall have watermelon and cucumber curers of dysentery and diarrhœa who will speedily kill some people whose dysenteries or diarrhœas have quite a different pathology, and then the vegetables, like many, sometimes, ambitious and vaunted members of the Materia Medica, will go away into deep disgrace. The proper relation of food and force being, by and by, better understood, we may hope to combat disease by such agencies only as nature employs in building up the human body.

Professional Perspicuity--Again.

In view of the indignation aroused by a certain editorial criticism, headed "Professional Perspicuity," in the August number of the Journal, upon a report of an *alleged* case of tetanus, contained in the July number of the *Chicago Medical Examiner*, we desire to explain, for the benefit of some who appear not to appreciate the fact, that a medical journal is designed to be, not a receptacle for literary rubbish, nor an advertising medium for the elevation of individuals into notoriety, but a source of *reliable* information to the profession; a record of *facts;* an index of scientific progress; and a medium for sifting the wheat from the *chaff*, the true from the *false*, in the current professional literature of the day. To the accomplishment of this object all our efforts shall be directed, and to that end we invite from *professional gentlemen* desiring to co-operate in the work, contributions of their views and opinions upon such topics as may interest the profession at large, whether in the shape of essays, or reports of cases which have *actually occurred under their observation*, reserving to ourselves the right to reject all which may, either from lack of scientific or practical interest, from *unreliability* of authorship, from *improbability* of incident, or from manifest *fraud*, seem to us to merit a place in the waste basket. To communications coming under the latter category, whether reaching us directly, or through the media of other journals, we shall show no mercy, and their authors need expect none. To all such who now, or hereafter may consider themselves aggrieved by legitimate criticism, we say, keep out of print; do not endeavor to exchange respectable obscurity for disreputable notoriety.

W. H.

Hospital Reports.

The attention of our readers is especially directed to the Hospital Reports contained in the present number. Each number of the Journal, hereafter, will contain a condensed summary of every thing interesting which has occurred in the hospitals of Chicago during the preceding month. These reports will be prepared under the immediate supervision of gentlemen of the professional staff of each hospital, respectively, and the profession at large will find in them an invaluable source of clinical instruction, and index for practical reference.

The city of Chicago possesses hospital facilities whose magnitude and excellence have been hitherto not properly appreciated by the profession at large, and we shall make the Journal the medium for rendering this source of professional knowledge available to our readers. We here tender our acknowledgments to Dr. Fenn, of Cook County Hospital, and Dr. Owens, of St. Luke's, for valuable contributions. W. H.

Appointment.

At the last meeting of the Trustees, Dr. W. W. Allport was unanimously elected Surgeon Dentist of St. Luke's Hospital.

Ovariatomy.

Drs. Benson and Yandell, of Louisville, Kentucky, and Dr. Tom O. Edwards, of Lancaster, have each recently successfully performed ovariatomy.

Medical Portraits.

A series of 100 photographs of eminent European medical men is offered for sale by Dr. W. H. Helm, of Sing Sing, N. Y. The likenesses are excellent, and are sent by mail at the low price of $15 for the 100, or $2 per dozen. They can probably be procured in this city of W. B. Keen & Cooke.

Our Home Physician.

We have received specimen pages of a new work with this title (by George M. Beard, M.D., of New York, assisted by Professors D. B. St. John Roosa and B. Howard), intended as a popular treatise on medical practice, with the praiseworthy object of displacing the various empirical "Guides to Health," etc., etc., with which the country abounds.

From a glance at the pages sent us, we should judge it well adapted for the purpose, but we are unwilling to fully indorse it without examining the work as a whole. We are unwilling to forestall either our own or the public's opinion. The question of the real value of such books is still an open one. We believe that the best way for all concerned is to popularize knowledge of *scientific* physiology, and displace the quack varieties thereof, which every where abound.

PUBLISHERS' NOTICE.

From the date of the present number, the undersigned will assume the publication of the Chicago Medical Journal, and the exclusive management of its financial and business affairs.

In undertaking this enterprise they are actuated by a desire to extend their relations with the profession with which they have been closely identified many years as the purveyors of medical literature in the Northwest. Believing that this intimate association, by familiarizing them with the literary wants of the medical profession, has given them peculiar and unusual facilities for the satisfactory prosecution of such work, they confidently ask the countenance and co-operation of old friends who have sustained the Journal during the twenty-six years past, both by continued subscription and frequent communication of the important results of their experience and observation to its pages.

The typographical and general mechanical excellence of successive numbers will be brought up to an equality with the best magazines of the country, and especial attention will be paid to its prompt issue at or before the monthly dates. The monthly form will be resumed, it having been found by experience that this gives better opportunity for a variety of matter, without detracting from space for admission of elaborate essays.

Specimen copies will be furnished without charge. To all new subscribers remitting subscription price, $3, for 1870, the remaining numbers of the present year will be sent free. Address,

W. B. Keen & Cooke,
113 *and* 115 *State Street, Chicago.*

Rush Medical College.

The opening exercises of the Twenty-seventh Annual Session occurred Wednesday evening, Sept. 29th. Introductory Lecture by Prof. E. L. Holmes. An unusually large number of students attended. Further particulars will be given the ensuing month, as our manuscript report has been unfortunately mislaid.

Editorial Notes.

American Pharmaceutical Association.

The recent meeting of this Association, in this city, (Sept. 7, 1869), was highly successful and satisfactory to the attendants. Delegates enrolled themselves from almost every portion of the country.

Mr. E. H. Sargent, of this city, was elected President for the ensuing year.

The next meeting will be held on the second Tuesday of September, 1870, in the city of Baltimore.

The most important part of their proceedings was discussion of appropriate legislation.

The following is a synopsis of the proposed law to regulate the practice of pharmacy, and the sale of poison, and to prevent the adulteration of drugs and medicines:

Section 1 requires that all shops kept open for the sale and dispensing of medicines and poisons, shall be under the oversight of a registered pharmacist or assistant pharmacist.

Sections 2, 3 and 4 require that no person shall use or exhibit the title of pharmacist or assistant pharmacist unless registered according to law; that no one can register unless a graduate in pharmacy, a practicing pharmacist or assistant pharmacist; that graduates must be from some college of pharmacy in the United States, or from such institution in a foreign country.

Sections 5 and 6 require the appointment of a Pharmaceutical Board by the Governor of each State, and that this board shall examine all candidates for certificates, and cause all prosecutions, and that all members shall pay ten dollars to the board.

Section 8 requires that all registered pharmacists shall furnish their addresses, for which a fee is to be paid. All changes are to be duly sent to the board.

Section 9 imposes a penalty for any false representations in the procuring of registration, by imprisonment from three to twelve months.

Section 10 imposes a fine of fifty dollars for the offence of selling any drugs or medicines, unless he be a registered pharmacist, to be paid to the board.

Sections 11 and 12 authorize the fining of any pharmacist for refusing to comply with the regulations of the board. This is not to interfere with the acts of any practicing physician in the line of his profession.

Section 13 imposes a restriction on the sale of any medicines

or poisons, unless the name of the same be placed on the bottle, and the address of the seller. It is the duty of all persons so selling to have the address of the person purchasing, and his name, with a statement of the objects such medicines or poisons are to be used for.

Sections 14, 15 and 16 prohibit the adulteration of any medicines, and require that all prescriptions shall be kept in a book for five years. For adulteration the fine may be $1,000, and imprisonment may be inflicted.

Pending consideration of these propositions, on motion of Dr. Squibb, of New York, the Association adopted the following series of resolutions:

Resolved, That the draft of a law to regulate the practice of pharmacy proposed by the committee of the Association, appointed for that purpose, be accepted and published in the proceedings of the Association, as being one method whereby the objects of this body, in regard to that subject, might be attempted; and that, as a method which embraces many useful details, arranged with great care and labor, it is recorded and published as well adapted to be useful to the legislatures of the different states, whenever they may see fit to respond to the earnest desire and call of this Association, and of the community at large, for enactment upon this subject.

Resolved, That the difficulties of constructing a form of law proper to be indorsed and recommended by this Association for general application in all the states, are such that we must be satisfied with enunciating the broad principles which, in our judgment, should direct any and all legislation upon this important subject.

Resolved, That we see with alarm and regret the rapid increase in the number of accidents which occur from mistakes and mismanagement in dispensing medicinal substances, and that we earnestly desire to see these casualties checked and controlled.

Resolved, That we regard the ignorance and irresponsibility of many who engage in the practice of pharmacy, without the proper qualifications, as the principal cause of such casualties.

Resolved, That a proper degree of education and qualification should be secured by law, and that all proper measures for educating and qualifying persons for duties so important, should receive more encouragement and protection from the law than they have hitherto done.

Resolved, That the report of the committee, embracing the proposed draft of a law, of the action had in this Association upon that report, and of these resolutions, be printed in pamphlet form; and that ten copies be sent to the governors and speakers of the legislatures of the different states of the American Union.

We regret that an additional resolution was not adopted, reprehending the too common practice of druggists prescribing for the patients of physicians who patronize them.

Loot.

Prof. J. Lewis Smith, of New York, recommends, in primary bronchitis, for an infant one year old, a teaspoonful of the following mixture, every two or four hours:

℞. Spts. ætheris nitrosi, - - - - - - f ʒ j
Syrupi ipecacuanhæ, - - - - -
Olei ricini, - - - - - - aa f ʒ ij
Syrupi tolutani, - - - - - f ʒ vij

Another eligible formula is the following:

℞ Syrupi ipecacuanhæ, - - - - - f ʒ ij
Potassæ acetatis, - - - - - gr. xvj — ʒ ss
Aquæ anisi, - - - - - - f ʒ xiv

M. Dose: One teaspoonful for an infant of six months. If there is decided febrile action, tincture of digitalis, one or two drops, according to the age, may be added to each teaspoonful.— *Medical Bulletin.*

The *rationale* of this is simply elimination by the kidneys. The so-called *expectorants*, when analyzed in effect, will be found to prove such only in so far as they act as diuretics.

Treatment in Diarrhœa of Infants.

Dr. Smith (*Med. News and Library*), in his valuable papers on the "Wasting Diseases of Infants and Children," recommends the following prescription, if the bowels are rather loose, with dark, slimy, offensive stools:

℞ Tinct. opii, - - - - - - *m* viii
Ol. ricini, - - - - - - - ʒ j
Syrupi zingib, - - - - -
Mucilag. acaciæ, - - - - - - aa ʒ j

M. S. — A teaspoonful three times daily. In the screaming fits, accompanied by constipation, this combination of castor-oil with laudanum is very valuable. — *Medical Record.*

This is another case wherein it will be found that to be effectual elimination by diuresis must be secured. See, on another page, observations on the use of fruits in diarrhœa.

In those cases of Headache resulting from gastric difficulty, eight or ten minims of chloroform given internally will materially

assist in removing it; or pour a small quantity on some cotton wool contained in a small glass-stoppered bottle, and apply the mouth of it close to the temple, or behind the ear, as near as possible to the seat of pain, for about five minutes. The effect is usually rapid.

A WRITER in the *London Lancet* recommends the following treatment of DISEASED GUMS: The teeth should be washed night and morning with a moderately small and soft brush; after the morning ablution, pour on a second tooth-brush, slightly damped, a little of the following lotion, and apply it to the affected parts: Carbolic acid, one scruple; rectified spirits of wine, two drachms; distilled water, six ounces. — *Medical Bulletin.*

A very efficient wash and gargle in these cases, and in many cases of stomatitis, pharyngitis, aphthar, etc., is afforded by:

℞ Sodae Biborat., - - - - - - -
Potassæ Chlorat., - - - - - - aa ʒ ij
Acid. Pyrolig., - - - - - - ʒ ss
Aq., - - - - - - - ʒ vss
M. ft. gargar, - - - - - -

S. Use as a wash.

MR. R. H. ALLNATT, of Eastbourne, whose monthly letters to *The Times*, on meteorological matters, have now become a recognized institution, gives, in his letter on the Meteorology of July, "a curious and suggestive fact" in reference to OZONE. He says that since the establishment, at Eastbourne, of an effective system of arterial drainage, the manifestation of elemental ozone appears to have been elevated, *pari passu*, to the level of the altered sanitary conditions. A few years ago the chemical tests, after long exposure, exhibited, frequently, feeble signs of reaction; but now they show invariable and decided marks of the presence of this allotropic agent. — *Lancet.*

Which suggests a change in the *type* of diseases, as it is conveniently termed. The catarrhal and inflammatory succeed the malarious and septic. At all events, the ozone finds less to neutralize it.

AT the Imperial Society of Surgery, the other day, M. Broca presented a Peruvian skull, found by Squier in an old tomb of the Incas, in the valley of Yucay, near Cuzco, and belonging to a date anterior to the time of Cortez. The interest of the skull to surgeons lay in the fact that it had been trepanned! The perforation was situated on the left side of the frontal bone; and from the appearance of the surrounding osseous tissue, no doubt

remained that the operation had been performed on a living person. M. Nelaton estimated that the patient should have survived the trepanning about eight days. — *Id.*

Another evidence that there is nothing new under the sun.

Rich Beef Tea.

THE addition of a small tablespoonful of *cream* to a teacupful of beef tea renders it richer and more nourishing.

It was formerly the habit, in directing beef tea, to order all the fat globules to be carefully skimmed from the top, whereby the "Hamlet was left out." Subsequently, the loss was attempted to be made up by administration of Cod Liver Oil. The cream is an improvement.

IN every 100,000 tons of the WATER supplied to London, the solid impurity averages from twenty-eight to forty-two tons; in Edinburgh, from eleven to fourteen tons; Bristol, twenty-eight tons; Manchester, six tons; Dublin, six tons; and Glasgow, only three tons. — *Exchange.*

It is doubtful if any city on the globe has purer water afforded it than this city of Chicago, and the consequence of this improvement on the past is patent to even the least observant in the general increase of health and longevity. Now let combined efforts be put forth to purify the atmosphere, both in and out of the houses.

M. MAILLOT, ex-president of the Conseil du Sante des Armees, counts as a great service rendered to his country his introduction into Algeria, in 1853, of the treatment of DYSENTERY by large doses of bismuth, warmly recommended by M. Monneret. In that year, four pounds of bismuth were forwarded to that country, at his request, for trial, under his observation. The result has been, that it has grown constantly in favor with the regimental surgeons, who have had it included in the troop medicine-chest; and that, in 1868, 920 lbs. weight were required for the treatment of dysenteric affections tn the army of Algiers. — *British Medical Journal.*

Much of the good effect of the introduction of bismuth in the treatment of dysentery, we are fain to believe, is from its replacing the powerful but injurious medication previously in vogue. Astringents, cathartics and mercurial "alteratives" have less relation to the cure of the disease than the too general reliance

upon them would seem to involve. The great question even in dysentery is: *What is the matter?*

Carbolic acid is running almost precisely the same race with creosote twenty-five years ago. Dr. McCall Anderson, of Glasgow, is experimenting on "the virtues of certain new (!) remedies" for cutaneous diseases. Prominent among these are coverings of vulcanized India rubber, and India rubber cloth, and the internal use of carbolic acid. Among others, he published the following cases in the Glasgow *Medical Journal:*

Eczema of hands, erythema papulatum, and psoriasis palmaris he treated with *India rubber gloves.* Several cases of psoriasis he treated by carbolic acid. ℞. Acidi Carbol. Cryst. ʒ iss, Glycerini q. s., aq. distil. ʒ vi, M. Sig. — A teaspoonful in a wine-glass of water, three times a day, on an empty stomach.

W. St. John Coleman, in the *London Lancet*, speaks of his success in treating chronic eczema, eczema rubrum eczema facii, and an obstinate case of impetigo larvalis, with carbolic acid. To an eight-ounce phial of glycerine and water he added about ♏xx of pure carbolic acid, and applied it locally night and morning.

Dr. Moritz Kohn, discussing lupus erythematosus, places most dependence on external remedies. The local treatment he recommends consists in removing the accumulated sebaceous secretion by means of applications of oils and various soaps; the use of "spiritus saponatus kalinûs" (sapon. viridis, ʒ iv; sp. vini. rect. ʒ ij; spir. lavand. ʒ ij); liq. potassæ; carbolic acid and the mineral acids; also sulphur (in powder), solid nitrate of silver, chloride of zinc paste, and the emplastrum mercuriale. — *Journal of Cutaneous Medicine.*

Ointment for Hæmorrhoids, by the late Prof. W. R. Fisher:

Take of Sulphate of Morphia,	- - -	three grains.
Extract of Stramonium,	- -	thirty "
Olive Oil,	- - - -	sixty "
Carbonate of Lead,	- - -	sixty "
Lard Cerate,	- - - -	three drachms.

Rub the extract, if not uniformly soft, with a few drops of water; add the powders and olive oil, and rub till perfectly smooth, and then incorporate them with the cerate. — *American Journal of Pharmacy.*

A better plan is to incorporate the active ingredients with cacao butter, and use as suppositious.

Cure for Warts.

Warts may be readily cured by cutting a hole in a piece of sticking plaster, the size of the wart, applying the sticking plaster so that the wart protrudes, and then using —

℞ Caustic potash, - - - - - ℥ ij
Gum arabic, - - - - - - ℥ ss
Flour sufficient. - - - - -

M. — Make a paste.

S. — To be left on for a few hours. — *Boston Journal of Chemistry.*

Dr. Boulou has devised the following plaster for rheumatic and neuralgic pains:

℞ Empl. plumbi, - - - - - ℥ xvj
Ext. pini sylvestris, - - - - -
Ext. Belladonna, - - - - - aa ʒ jss

Spread evenly over fine strong linen, so that every square inch should contain two grains of the active ingredient. — *Medical Archives.*

Sulphite of Soda in Chronic Cystitis.

Mr. L. Willcox, late house-surgeon of King's College Hospital, recommends the use of sulphite in those cases of chronic cystitis where the urine decomposes before it is eliminated. He finds that by the employment of sulphite of soda all the putridity disappears, and the urine becomes clear and colorless. — *Canada Medical Journal.*

Dr. J. Waring Curran recommends the iodide of ammonium in diseases of the glanular system. The following are his prescriptions in Goitre:

℞ Ammonii iodidi, - - - - - gr. xv
Spiritus chloroformi, - - - - ʒ ij
Aquæ camphoræ, - - - - - ad ℥ viij

M. S. — ℥ j ter in die.

℞ Ammoni iodidi, - - - - - ʒ ij
Glycerine, - - - - - - ʒ ij
Adipis benzoat, - - - - - ℥ jss

Ft. — Unguent. — *Journal of Chemistry.*

Hypodermic Injection of the Tincture of Calabar Bean in Epilepsy.

Dr. F. C. Wilson, of Virginia, reports several cases of epilepsy, which he treated by injecting hypodermically ten to twelve minims of the tincture of calabar bean. He alleges that, in patients having a series of epileptic convulsions, recurring at

intervals of eight, ten or twenty minutes, the paroxysms at once ceased, and that they soon dropped off into a quiet sleep.

The doctor says that the calabar bean may be combined with strychnine, thus enabling a much larger dose of each to be given than would be safe if given separately.

We think these experiments sufficient to recommend to the profession its further trial in this disease. Will any one give us the result of their experiments with this remedy? — *Richmond and Louisville Medical Journal.*

Dr. Brown-Sequard's Usual Prescription in Epilepsy.

℞ Potass. iodidi, - - - - - - ʒ j
Potass. bromidi, - - - - - - ʒ j
Ammon. bromidi, - - - - - - ʒ iiss
Potass. bicarb, - - - - - - ℈ ij
Inf. columbæ, - - - - - - f ʒ vi

M. Sig. — A teaspoonful before each meal, and three teaspoonfuls at bed-time, with a little water. The medicine should be pushed until anæsthesia of the fauces is produced, and an acne-like eruption appears on the neck, face, shoulders, etc. Continue treatment for sixteen months after the convulsions have ceased, an occasional purgative being given.

Another Formula of the Same.

℞ Potass. bromidi, - - - - - ʒ vj
Ammon. bromidi, - - - - - - ℈ ij
Potass. bicarb., - - - - - gr. xv
Tr. columbæ, - - - - - - ʒ iss
Aquæ, - - - - - - ʒ iij

M. Sig. — One to two teaspoonfuls three times a day, before meals, in a little water.

N.B. — The above remedies may prove very serviceable in some cases of emphysema, hooping-cough, and nocturnal emissions. — *Physician and Pharmaceutist.*

Hypodermic Injection of Morphia in Sun-Stroke.

Dr. J. H. Hutchinson (*Pennsylvania Hospital Reports*) reports the very great success which followed the hypodermic injection of the sulphate of morphia as a remedy for the excessive jactitation, restlessness, and convulsions which so often attend sun-stroke. It was used as auxiliary to the ice treatment. — *Id.*

Goitre — Hypodermic Injection of Iodine.

The author treats goitre by hypodermic injections of iodine. He began with four or five drops of the tincture, and gradually increased the quantity, repeating the injections every eight days or so. — *Prof. A. Lücke, in Berliner Klin. Wochenschrift. — Id.*

Spasmodic Asthma of Children.

Bromide of Potassium, in six grain doses in syrup. every two hours, is worth a trial in this affection. — *Dr. W. Begbie, M. Sondahl.*

Chronic Catarrh.

Give five minim doses of tincture of aconite every four hours. Opium has a similar action in such cases. — *Dr. S. Wilks, Id.*

Unguent for Bronchocele.

Prof. James R. Wood, of New York, extols the following formula as an ointment in bronchocele and other glandular tumors:

℞	Ung. stramonii,	℥ ij
	Ext. conii,	ʒ ij
	Iodid. potassii,	ʒ ij
	Iodini,	gr. x

M. — *Detroit Review.*

Removal of the Odor of Carbolic Acid.

A correspondent of the *Lancet* says: "The disagreeable odor left by carbolic acid can be readily removed by means of chloride of lime or Condy's fluid." — *Dental Cosmos.*

Muriate of Ammonia as a Remedy.

Dr. Cholmeley * * * confirms the observation of Dr. Anstie in a paper in the December number of the *Practitioner*, as to the great efficacy of the muriate of ammonia as a remedy for neuralgia and myalgic pain. But Dr. Cholmeley goes on to say that with regard to a matter on which Dr. Anstie spoke more doubtfully — the efficacy, namely, which certain authors have ascribed to this drug as an emmenagogue — he has formed, from a large experience, a decided opinion in favor of the utility of this medicine. He is convinced that in a very large number of cases of absent or suppressed menstruation, muriate of ammonia acts in a very direct and powerful manner in establishing or restoring the flux. Dr. Cholmeley has now experimented with the muriate, in doses of 10 to 20 grains, in so large a number of hospital and dispensary patients, that he can not suppose there is any room for fallacy in this conclusion.

On Muriate of Ammonia as a Remedy for some Nervous Affections.

The *Edinburgh Medical Journal* thus refers to Dr. Anstie's paper:

"Muriate of ammonia is one of those common-place and unattractive substances which we, in this country, are little apt to credit with extensive remedial properties in disease." We quote the first sentence of an eminently suggestive paper by Dr. Anstie (*The Practitioner*, December, 1868), which treats principally of the employment of this remedy for the relief of (1) various kinds of pain, and (2) of certain cases of suspended secretion dependent on nervous exhaustion. Before very briefly describing some of the applications mentioned, we think it right to state that we are by no means prepared to coincide in Dr. Anstie's therapeutics, in so far as this is founded on physiological data. Under the first class the disease termed *myalgia* is said to be specially amenable to treatment by muriate of ammonia. Doses of from ten to twenty grains are recommended, and by their use this disease may be cured as certainly as ague by quinia. This class also includes various neuralgias proper, such as *migraine* (usually referred to disorders of digestion) and *clavus hystericus;* both of which Dr. Anstie believes to be distinct and primary neuralgias of the fifth cranial nerve. Of all the internal remedies that can be employed in these headaches, none is apparently so beneficial as the muriate of ammonia, its virtue depending on its mildly stimulant properties. It should be given in the same doses as for myalgia. In *intercostal* neuralgia, and especially in that form met with in suckling women or in phthisical patients, this remedy is also of great value, frequently "pain being relieved in half an hour." It may also be used with advantage in the milder varieties of *sciatica*, which occur in young and debilitated persons; and in that somewhat obscure form of neuralgia termed *hepatic*. Among the therapeutic applications to relieve suspended secretion, Dr. Anstie expresses his conviction that muriate of ammonia "is the most powerful of all functional restoratives" of suspended bile secretion. He especially recommends it in those cases where the disease is produced by severe and exhausting mental excitement; and mentions that he has seen several instances in which two or three doses of twenty grains have caused a marked recommencement of biliary secretion. All these, and various other therapeutical indications, are founded on the supposition that this remedy is a "pure tonic stimulant" to sensitive and to vaso-motor nerves.

Lime-Water in the Treatment of Bright's Disease.

KUCHENMEISTER recommends, in the treatment of Bright's disease, and of nephritis, after scarlatina, the use of large doses of lime-water, theoretically from its having the property of dissolving proteine. Lyon Médicale details the treatment, and says that caustic lime in solution, or any of the soluble salts of lime, will answer equally well. He has seen the urine increase from

30 grammes to 120 the first day, 180 the second, 300 the third, and up to 1,020 the seventh day, under this influence; sometimes a slight hæmorrhage necessitates the disuse of this treatment; but the quantity of albumen in the urine sensibly diminishes. — *Medical Press and Circular.*

Amblyopia Cured by Hypodermic Injection of Strychnia.

Dr. Jos. Talko, of Tiflis, reports (*Klin. Monatsblätter f. Augenheilkunde, Mai*) a very interesting case of amblyopia cured entirely and solely by this method. The doses used were $\frac{1}{12}$ raised gradually to $\frac{1}{4}$ of a grain of nitrate of strychnia; the injection was made in the neighborhood of the affected eye; it seemed to answer best when done in the supra-orbital region. The cure may be said to have occupied about seven weeks, and was then complete. It is remarkable that such large doses, repeated as often as once a week, produced neither local inconvenience nor constitutional poisoning, with the exception of the trivial symptoms. — *The Practitioner.*

Calabar Bean in Tetanus and Trismus Neonatorum.

Dr. Monti has been trying this treatment in four cases of tetanus in new-born children, and one case of traumatic origin in a boy four years old. The traumatic case and two of the infants recovered; the remedy was mostly administered by subcutaneous injection. The author remarks on the extreme rarity of favorable results in this disease, and concludes, from his own experience, and that recorded by other observers, that calabar bean offers a much better prospect of positive therapeutic results than does any other drug. The proper dose for subcutaneous injection of an infant a few days old seems to be $\frac{1}{30}$ to $\frac{1}{6}$ grain of the extract; in the boy of four years old, Monti injected as much as $\frac{1}{2}$ grain, and a total of $6\frac{1}{2}$ grains of the extract were given altogether, by stomach and by skin. — *The Practitioner, August*, 1869, *from Jahrb. f. Kinderheilkunde, Mai.*

Preservation of Dead Bodies.

At the meeting of the Imperial Academy of Medicine (June 8), M. Devergie stated that, at the School of Practical Anatomy, bodies injected with a mixture of three parts of glycerine, and one of carbolic acid, had been preserved for several months without giving off any unpleasant odor.

A New Styptic Collodion.

M. Carlo Paresi gives, in the *Gazette de Turin*, the following recipe: Collodion 100 parts, carbolic acid 10 parts, tannin 5 parts, benzoic acid 3 parts.

Agitate until a perfect solution is formed. It is of a brownish color, gives a pellicle similar to ordinary collodion, and instantly coagulates blood. — *Indian Medical Gazette.*

Dr. Willard Parker, of New York, is responsible for the following prescription:

℞ Magnesia carb., - - - - - ʒ i
Cret. preparat., - - - - - - ʒ ss
Ferri carb., - - - - - - ʒ ij
Sodii chlorid., - - - - - - ʒ ss
Sodæ carb., - - - - - - ʒ iij

M. S. — Two grains and a half at a dose.

It is proper to add that the patient was directed to resume tee-total habits, which had been temporarily laid aside.

The *Investigator*, of this city, thinks the damp weather of the early summer attributable to the eclipse, and the increased prevalence of cholera morbus due to the damp weather, and that Arsen. "stopped the whole train of symptoms short off." In one case Verat. was needed to stop the cramps. We are delighted to read also that, "In this disease, this year, our experience and observation have led us to look upon Arsen. as meeting the *genius epidemicus*."

It is asserted that acute *Orchitis* may be subdued, in twelve hours, by applying a strong solution of Nitrate of Silver over the entire surface of the swollen part. Meanwhile, it is suggested as desirable to bring the patient under profound sedative influence. In the olden time orchitis was commonly treated by antimonial emetics carried to the production of uttermost nausea. Either plan seems better than the modern heroic one of puncturing the tumor at once.

Sulphophenic Acid.

Mr. Joseph Hirsh, in the *Pharmacist*, claims for Sulpho-carbolic acid a disinfecting power over simple Carbolic acid in the proportions of 375 : 225. Aside from its greater efficacy, he says, the point of economy is in favor of Sulpho-carbolic acid, as it can be produced at less cost. This is a point of considerable importance, as the demand keeps Carbolic acid at too high a price for that profuse use needed to secure its satisfactory

action as a general disinfectant. For the latter purpose it is said (Squibb) that the impure acid is superior.

"The Sulpho-carbolic acid was prepared by digestion of its two constituents for thirty-six hours. The mixture gradually grew warm, the rise of temperature continuing for twenty-four hours, when it slowly subsided. The mixture of the pure acids assumed, slowly, a greenish color, which finally grew very dark, so as to be easily mistaken for black, as is the case with the aniline black, which, in reality, is a dark green. The crude Carbolic acid grew warm much sooner with the Sulphuric than the pure, due to the decomposition of the impurities by the Sulphuric acid, its color being jet black. It emitted, continually, pungent fumes of Sulphuro-carbolic acid, which were highly volatile and penetrating. Its disinfecting power was tested with putrid blood, and was found to stand between that of Carbolic and Nitrophenic acid. * * * * * Experiments, to determine the comparative disinfecting power of Carbolic and Sulpho-carbolic acid, disclosed the fact that Carbolic acid (the impure used by the city, and, according to Squibb, much superior as a disinfectant to the pure acid) was capable of disinfecting eight thousand parts of Chicago River water completely; the water in greater quantity evolving "strong" volumes of the fetid, sulphureted and phosphorated hydrogen. This last odor adhered to the vessel after emptying the partly disinfected water. The Sulpho-carbolic acid, also crude in the dilution of 1-16000, completely disinfected the same water, taken at the same time from the same vessel, while a further dilution to 1-32000 made the odor of the water appear, but very faintly, while at the same time that of the disinfectant was still plainly perceptible. After emptying the mixture, and filling the vessel, in which the disinfection had taken place, twice with pure water, washing it each time, there still remained a strong odor — but not unpleasant — of the disinfectant, which thus seemed to adhere, with extraordinary tenacity, to the vessel. Disinfection is due to the chemical combination of the disinfectant with the noxious substances, which thus become neutralized, amounting to the same as annihilation, since they then lose their characteristic activity just in the same manner in which this takes place with other chemical compounds in case of neutralization. As a process of chemical combination, disinfection is subject to the usual mathematical rules governing all combinations, and laid down in the tables of equivalents.

"According to these, it is not surprising that the mineral acid compounds of Carbolic acid possess a higher saturating, and therefore disinfecting, power than the Carbolic acid itself.

"Sulpho-carbolic acid may be represented by the formula:

$HO+(C_{12}H_5O,SO_3)SO_3$; *i. e.*, it is made up of two atoms of Sulphuric acid, of which fifty parts, by weight, will neutralize, or in our case, disinfect, as much as 125 parts of Carbolic acid, which is also contained in the above." — *Pharmacist.*

In order to obtain the 315 grammes of nitrogenous matter which man requires daily, it would be necessary, according to Payen, to consume sixteen dozen oysters, if they should form the sole nutriment. — *Journ. de Pharm. et Chem. Id.*

Dr. A. Frœhde established the identity of Hydrocarotine and Cholesterine, of which the former seems to be a hydrate. This partly illustrates the nutritive value of carrots. — *Archiv. der Pharmacie. Id.*

Extract of Calabar bean, suspended in gelatine, forms convenient elastic sheets for application to the eye. The dose contained in a small piece should be 0.010 gr. of the bean, or 0.0005 gr. of the extract. — *Arch. der Pharm. Id.*

Prof. Buchner, in Munich, demonstrated lately again the transformation of Arsenic into Sulphide of that metal in cadavers of those poisoned with the acid. — *Arch. der Pharm. Id.*

On the Use of Starchy Food for Infants.

At a meeting of the Obstetrical Society of London, July 7, (*Medical Times and Gazette,*) a paper was read, by Dr. Selby Norton, on Teething.

In this paper the author advocated the opinion that the maladies usually attributed to teething are due to the wide-spread and unphysiological practice of feeding infants on starch foods. He showed that starch was non-digestible by the infant stomach, partly because no minute division of the starch granules could be effected in the infant's mouth, and partly because, from the mode of feeding, the greater part, at all events, of the starch is passed at once into the infant's stomach without being rendered soluble by the ptyalin of the saliva. The diseases usually ascribed to teething — diarrhœa, convulsions and bronchitis — in the author's experience, never occurred in a naturally fed child; and, on the other hand, they occurred sometimes in the first month, where the teeth obviously could exercise no baneful influence, and they occurred, too, when the gums were quite cool and natural. After considering these diseases at some length, and showing how often they could be directly traced to the irritation of bowel produced by starch food, he concluded by condemning altogether farinaceous food for infants, and advocating the sole use of cow's milk diluted with water.

Dr. T. Ballard said he was pleased to see some one come forward to support the "heretical" doctrine that teething was not a cause of infants' disease — a doctrine he had advocated many years ago. While so far, however, agreeing with the paper just read, he could not coincide in his view that starch was such a patent cause of disorder. He did not think starch, *per se*, was harmful, though of course it was not a substance on which an infant could be reared. With respect to the general subject of infant mortality, he thought that practical good would result from the inquiry if the Society could agree upon some formula of dietary for general recommendation of a simple and intelligible character. He would also lay much stress not only upon the importance of sufficient food, but on the importance of not allowing the bowels to act more than twice in the twenty-four hours. This could be effected by attention to the mode of giving the food; by not allowing an infant to suck without obtaining the food it craves, or to suck too hard to obtain it. In either case the bowels became disturbed and diarrhœa was the result. Should this occur while the child is at the breast, the too frequent motions indicate the necessity of some supplementary feeding; or, if the infant be fed entirely from the bottle, there is probably some defect in its construction or action. Where maternal milk, in sufficient quantity, could be obtained, of course no other food was requisite. Next to this came the milk of some other animal, and, where circumstances required it, to this might be added some preparation of wheaten flour.

Dr. Phillips considered it injudicious to give any farinaceous food to an infant under six months old. The practice was as physiologically incorrect as it was practically found to be hurtful. The paper read had not convinced him that no evils were ever caused by teething; but he quite believed that the evil effects ascribed to teething were often caused or increased by improper feeling. At the Children's Hospital, instructions "How to bring up Babies," had been distributed with the best effect.

Dr. Brunton said that he also objected *in toto* to giving a child farinaceous food up to six or eight months. Up to that age, where suckling could not be carried out, he gave cow's milk and water, sweetened, increasing the proportion of milk as the child grew older.

Dr. Routh said that on no point was there more evidence than against the use of starch for infants before they had teeth. For— 1. The assimilation of starch depended on its conversion into sugar by the saliva, but infants secreted no saliva for the first two or three months; 2. In infants dying after the use of starchy food, examination showed that it passed through the alimentary canal unchanged; 3. The alimentary canal of a baby was that of a carnivorous animal; 4. The food supplied to purely herbiv-

orous animals recently born was animal. *Ergo*, starchy food should not be given to infants until, at all events, the appearance of teeth. He could not agree with the recommendation of cow's milk diluted with water, as a good food for infants. The milk, before it was purchased, was generally watered, deficient in cream, acid, and wanting in sugar of milk. If used at all, it must be mixed with lime-water, and sugar of milk added in proportion of half to one ounce of lime-water, and a spoonful of sugar of milk to every half-pint of milk, with one-third water. It should be begun early, even from birth, in all cases where it was clear beforehand that the mother could not nurse long. The idea that it was wrong to mix two milks was fallacious, and his experience had proved to him that the earlier it was begun the more readily the child's stomach bore it, and in nine cases out of ten a child so prepared could be weaned readily and with safety. To one other point only would he refer — the congregation of infants in nurseries. This was a most dangerous practice. The atmosphere generated under these conditions was most baneful, probably from the qnantity of ammonia generated from the urine, as well as sulphuretted hydrogen and other noxious gases from the stools. Children required air, and pure air especially. Their respiration was more rapid than adults. Such congregation of infants was always, therefore, a great cause of infant mortality. Malignant thrush, *muguet*, and contagious diseases spread like fire in such atmosphere. — *Phila. Reporter.*

Antiseptic Treatment of Wounds.

Letter from Dr. J. C. Warren. — *Mr. Editor:* Having recently had the privilege of visiting the wards of Prof. Lister, at Glasgow, it may prove of some interest to the readers of the *Medical Journal* to learn the latest modifications he has made in the antiseptic treatment of wounds.

This subject still continues to excite considerable interest in most English cities, and has been taken up and employed successfully in some of the continental schools. Although this system has been condemned by many distinguished surgeons, it has not been by any means universally so, and still claims several enthusiastic supporters in Great Britain.

It may be as well to touch upon his germ theory of putrefaction and the process of healing by scabbing, although the subject has been very clearly and elaborately exposed by him in a series of articles which have appeared during the last eighteen months in the *Lancet and British Medical Journal.* The germ theory may be briefly stated thus: — suppuration in wounds is caused by an irritation produced by the presence of germs or organisms which find their way into a wound, and there multiply and cause putrefaction.

Putrefaction, then, is the exciting cause of suppuration in a wound: can this be prevented, the largest wound may heal without any secretion of pus. This process of healing, such as may take place in a large lacerated wound of the leg accompanying compound fracture, is not considered by him to be healing by "first intention," nor indeed "by granulation." It is rather an intermediate process. Given a wound sufficiently large and accompanied with sufficient loss of substance to be incapable of healing by first intention — the extravasated blood and serum cover the surface of the exposed parts and form a clot which serves the purpose of a protecting scab. Provided now that no living germ is introduced beneath or penetrates this covering, the cell formation takes place quietly in the parts below, while the clot itself becomes organized in the same manner as a thrombus in an artery. The clot or scab establishes in this way a vascular connection with the parts beneath. Meanwhile, cicatrization continues, and as the edges of the wound approximate each other the scab is compressed on all sides, and finally atrophies and comes away. If it is cut into, however, before union is complete, it will *bleed.* When a wound heals in this manner, no pus whatever is found upon the dressings. They may be stained by the escape of a small amount of serum and what is called a mucous discharge. This fluid, examined carefully under the microscope, is found to contain no pus corpuscles whatever.

The antiseptic treatment of wounds has undergone a variety of modifications since Mr. Lister first began his experiments, some two years ago. Most of these have been described at length in the English journals, and will hardly need repetition here, especially as his present method differs from them in several essential particulars.

The dressings are now changed daily, and the tin plate and the paste have been discarded, and a very thin piece of oil silk and a lac plaster* are used in their place. After an operation the wound is washed with a solution of Carbolic acid, one part to twenty of water, and the edges are brought together by antiseptic sutures. The nozzle of a syringe is then introduced into one end of the wound, which is freely syringed out with the same solution. A strip of very thin oil silk, rendered antiseptic by being dipped into the acid solution, is then placed upon the wound of a size just sufficient to cover it. The object of this is to protect the wound from the Carbolic acid contained in the dressing next

* The receipt, as given us by the New Apothecaries' Company, at Glasgow, is the following:

Take of Shellac 3 parts,
Carbolic acid 1 part.

Dissolve with gentle heat, and spread with machine; when spread, coat with a solution of gutta percha, 1 + 16 of bisulphate carbon.

to come. This consists of the lac plaster. Before application the plaster is stripped off from its cambric, by moistening the cloth in water. This is done in order that the plaster may more easily adapt itself to the parts about the wound. The gutta-percha layer must also be rubbed off. The size of the plaster thus applied is sufficient to overlap the wound an inch or two in all directions. Above this is applied another much larger piece of the plaster, with its cambric on, and the whole is secured by a bandage.

The object which he tries to accomplish is to *blockade* the wound in all directions by dressings exhaling Carbolic acid vapor, while the wound itself is not touched by the acid at all. The small amount of the acid left in the wound soon ceases to exert any irritating influence, and the wound is exposed only to the vapor of the acid which penetrates the oil-silk covering. Mr. Lister has found by experiment that the vapor of the acid which passes through a piece of oil-silk is sufficient to disinfect any animal matter which may be on the other side. Any secretions which exude from the wound and become exposed to the air are thus thoroughly disinfected before they have a chance to regurgitate. The same fate awaits any germ which tries to find its way in with them.

If there is any discharge from the wound the dressings should be changed daily. The upper dressing being removed, the lower layer of plaster, which adheres closely to the skin, is carefully peeled off from one end and with it the oil-silk. As the wound is exposed it is syringed with the $\frac{1}{40}$ solution, and this is continued until the new dressing is applied.

Plaster dressings can not be applied in all cases; for instance, on wounds about the genital organs. In such cases a piece of lint soaked in a solution of one part to five of oil is used, but this must be changed frequently.

We should not omit to add that the parts to be operated upon should be well washed with a weak solution of the acid, and if there are any folds of skin or parts covered with hair in the neighborhood, these should be rubbed hard with the $\frac{1}{5}$ oily solution, to destroy any organisms that may be lurking about.

A word here about the antiseptic ligature and suture. A detailed account of the ligature of arteries on the antiseptic system has been given by Mr. Lister in an article in the *Lancet* of April 3, 1869, and he still continues to employ ligatures prepared in this way. This, in brief, consists in the employment of fine catgut ligatures steeped in an oily solution of the acid of the strength of one part to five, with a small quantity of water diffused through it. It has been found, by experiment, that such a ligature not only does not exert any irritating influence on the parts about, but eventually becomes organized and intimately

connected with the outer coat of the artery and the surrounding tissue. At present, torsion is used almost universally in England for all the smaller arteries, and the writer had the opportunity of witnessing an amputation of the breast by Mr. Lister, where not a single ligature was used.

Up to the present time he has contented himself with employing silk for sutures — with one exception, however. This was in an operation for the removal of a small tumor on the forehead, where catgut sutures were used. The wound was dressed antiseptically, and the patient left for the country and was not seen for several days. On his return, the dressings were removed, and the wound was found to have healed without suppuration. The sutures remained, to all appearance, unchanged; but on seizing one of them with the forceps in order to cut them with the scissors, the external portion came away easily, leaving *no trace behind* of the part which had been buried in the edges of the wound. The same was the case with all the other sutures. He is of the opinion that in this case the deep portion of the suture had either become organized or was absorbed. He purposes to experiment further in this direction to see if this result is constant.

The antiseptic dressing has been found to be most successful in the treatment of abscesses, compound fractures, excisions of the breast, and in those wounds to which the dressing can be easily and accurately applied. He has not had uniform success in the treatment of amputations, though he has found them, on the whole, to do much better than when dressed according to old rules. During the last two years that he has employed this system, he has had but one case of erysipelas and two of pyæmia. This, in wards which contain on an average some sixty patients, and in an infirmary which has for its site an old cholera burying-ground, is certainly something to boast of.

The writer has had the opportunity of conversing at length with Mr. Lister on this system, and also with many prominent English surgeons, and can truly say that no where has he seen the details so carefully attended to as in Mr. Lister's wards. Most surgeons, in England, at least, have contented themselves with following his directions in a general way, frequently omitting some important particular. For instance, one writer states that he took great pains to wash out his sponges in water both before and during the operation! The very thing he should have taken care not to do, unless the water had been previously rendered antiseptic.

Whatever the merits of the antiseptic system may be, it is very evident that a proper appreciation of them can never be arrived at without that scrupulous attention to detail which has so frequently been insisted upon by its originator.

Very truly yours, J. C. Warren, M.D.

Colotomy for Relief of Cancer of the Rectum with Stricture.

On the 24th of last February, I was called to see Mrs. M., a Scotch lady, aged sixty-four years; mother of eleven children. She had been treated by several surgeons for "inward piles." An examination per rectum revealed a stricture one inch from the anal orifice. She said, "before this bowel trouble, she had never required medical aid; never had any of the troubles of women in child-birth; had the constitution of a *Heeland poney;* took forty-five pills now to open her bowels, of which one several years preceding was sufficient; for several days and nights was constantly on the stool; the discharges were as pipe-stems, mixed with blood and very offensive; with intolerable scalding, burning pain; was frequently two or three weeks without a discharge from bowels; did not think she could survive another day, from the pain and distension; had suffered more or less sixteen years," etc.

In the presence of the Drs. Boerstler, I dilated the stricture (with an instrument similar to the dilator used in glove fingers), and during the next twenty-four hours she passed five chamber-pots full of fæces; passed corn eaten in August; and fell thirty-six inches in circumference. This afforded relief, but the hæmorrhage was nearly five pints, and precluded a repetition of future dilatation.

This operation, however, afforded an opportunity for diagnosis, and that was cancer of the rectum, the stricture a part of that disease—prognosis death. The treatment, concentrated food, and to relieve pain Svapnia (Dr. Biglow's purified opium).

From February to July her condition, from proper diet and anodynes, was tolerably comfortable, with only occasional paroxysms of pain and great tenderness. So painful was the simple touching of the stricture, as that she positively refused any future examinations, alleging a continuance of the pain following the touch of the fingers for days. In July, with the excessive heat, pain, tenderness and anorexia, we hoped the case would terminate, and as she always said, "she was not afeard til' dee;" we gave the Svapnia in doses as high as fifty grains in twenty-four hours, and even these doses failed of relief. I then proposed *Colotomy as a palliative measure;* and as the thermometer then was in the nineties, we awaited a change in the temperature, until the morning of the day of the eclipse, 7th of August last, hoping, as had frequently before resulted, that we should have cooler weather. In the presence of Drs. Boerstler, Wagonbuds, Kinsman, Carpenter and others, the patient being fully anæsthetized, I performed Amussat's operation. I think it unnecessary to detail the various steps of my operation, but refer the reader to Erichsen's Surgery, or for greater satisfaction to Prof. Blackman's detail of two cases, in *Cincinnati Journal of Medicine*, Febru-

ary and March, 1866. I followed Amussat as closely as possible, and found just the place "where the difficulties of the operation commence," and where Prof. Blackman truly says, "here you will meet trouble." I met it by the protrusion of more than a pound of fat; I removed it; then in the triangular space, in front of the quadratus lumborum found the colon; brought it to the surface by two ligatures passed through it, used them with other two in fixing it to the skin, having previously made a slit of one inch and a half in the bowel, and dressed the wound as directed. I made an incision of nine inches through the integuments, thus giving ample room; and by the use of Carbolic acid, not one drop of matter ever formed, and I did not remove the sutures until the tenth day. (Commend me to Carbolic acid as a dressing.) On the seventh day, fæces were discharged from this artificial anus, and two passages a day with immense flatulence (however gradually lessening), have continued and now exist.

I will state one fact, that probably aided me and is not recorded. I used a hair pillow under the abdomen, the patient lying on her face. This protruded the flank and threw the colon outward. Could I have done so, I would have injected into the colon a quart or so of gruel, but the stricture precluded it. The hair pillow was the only substitute and answered a good purpose. I found a large impaction of magnesia in the colon, and on tracing the rectum down encountered the cancerous nodules.

This is now the sixth week of the operation, and in my long professional life, no operation or duty performed, gives me more pleasure. There is perfect rest, return of appetite, with Svapnia gradually reduced from fifty grains a day to four, and only some trouble to keep open the orifice as it is closing with cancer cells. For this purpose I use a silver dilator and compressed sponge, and should my patient not live one month more, I am assured it will be the most comfortable one for years.

I prefer the space that might be occupied by details of the operation, to be used in presenting arguments in favor of or against the operation of Colotomy. It is a formidable one, and has friends and decided opponents. It may in some unfortunate case decide the surgeon to perform Colotomy, and would be more profitable to him than my detail of one case, which detail he will find as referred, better than I can describe it, but the arguments may not be so convenient. I am indebted to the research of Prof. Blackman for my extracts, and will use them liberally.

Prof. Gross, third edition, Comprehensive System of Surgery, 1864, vol. 2., p. 619, says: "It ought to be discarded as among the obsolete devices of surgery." "I have performed the operation but twice, and I do not think any thing could even induce me to attempt it again," and offers an apology for even describing

it. In another place he calls it "a criminal procedure." Mr. Pirrie, of Aberdeen, in his last edition of Surgery, quotes Prof. Gross, with approbation.

Prof. Henry H. Smith, in his great work on Principles and Practice of Surgery, vol. 2, p. 441, says: "At first sight it would appear that this operation must evidently expose the patient to loss of life, and can but prolong it only at the expense of a most loathsome disease. That the bowel may be thus opened, is certainly an evidence of the efforts of the surgeon towards relieving the defect of nature; but the results are by no means positive that the operation can assure to the patient, even a continuance of a miserable existence."

I might refer to many other leading authorities, who, if they do not denounce the operation as "criminal," offer no arguments in its favor, but prefer a quotation from Mr. Teele, of Leeds, who, in his valuable article published in Costillos' Cyclopædia of Practical Surgery, vol. 2. p. 219, lays down the following doctrine: "It has been maintained that the surgeon is not justifiable in prolonging the life of an infant, in whom the anus and rectum are imperforate, upon the loathsome condition of an artificial anus; but such an opinion cannot be justified upon any principle of morality, since an imperative obligation rests upon the surgeon to employ to the utmost of his ability, the means placed at his command for the relief of human suffering and the prolongation of life. In obstructions from carcinoma, the operation has been objected to, on the ground that the disease itself must in a short time prove fatal; but if the obligation of the surgeon to prolong life in infancy be imperative, surely he will feel it no less binding in reference to adult age, when he considers how vast and important may be the concerns which hang upon the prolongation of life in an adult human being for a few months, or even for a few days or hours."

Now let us try Prof. Gross' sweeping denunciations of this operation by his instructions for the performance of amputations in *malignant diseases*. See his remarks under the head of Operative Surgery and the Qualifications of a Surgeon, p. 473, vol. 1, op. cit: "It is a sad and humiliating spectacle to see a surgeon cut off a limb, or remove a cancerous tumor, merely for the sake of having it said that he performed an operation. I am daily shocked by the reports of cases of the extirpation of malignant growths in the hospital, as well as in the private practice of this and other countries. The question may well be asked, when will such silly and unmeaning, or to use the proper expression, criminal proceedings cease to disgrace our profession, and to shock our sensibilities?" Now, should I prove Prof. Gross himself guilty of such "criminal proceedings," my reader may be shocked. We quote from page 496, vol. 1, where he speaks of

amputations in general. "To cut off an arm at the shoulder, on account of an incipient cancerous affection of the head of the humerus, when the elbow, forearm, hand and fingers are all perfectly natural and glowing with health, unconscious, so to speak, of the fate that awaits them, is enough to sicken the stoutest heart, and to discourage the boldest operator. If there is a more disagreeable task than this, I am ignorant of it, *and yet I would not shrink from its performance* (the italics are our own) *even when there is but a faint prospect of prolonging life, if only for a few months.*"

He also, at page 501, repeats the same doctrine, and at page 477 recommends the amputation of a deformed foot, as he "can see no difference between the physical suffering that is induced by a diseased bone, and the mental distress that results from a distorted foot." In varicocele he recommends the operation, because "its mental effects destroy the happiness of the patient," and this operation, in his own skillful hands, has proved fatal. Again, at page 924, vol. 2, he advises operative interference in cases of malignant disease of the breast, when, "as not unfrequently happens, the patient's mind, filled with gloomy forebodings, is in a state of constant depression and despondency. Here the knife acts as a cordial; hope is revived; new life springs up, and for a while, at least, there is relief from suffering." In many other cases he would operate as "a palliative," even to remove the effluvia which poisons the air the patient breathes. We could quote further, but our position is conceded. If any further proof were needed, we would refer to Velpeau's testimony to Prof. Bennett, of Edinburgh, in speaking of operations for relief of *malignant diseases*, when he says that "to my former list I could now add nine hundred and ninety-one cases."

Mr. Erichsen says, in his London edition of his *Science and Art of Surgery*, page 1,029, that he witnessed Amussat's first operation in Paris in 1839, and since that period it has been performed nearly fifty times (forty-seven — mine the forty-eighth case) — and that when the operation has been followed by fatal results, peritonitis does not seem to have exercised any material influence, but death from previous disease, on the constitution or changes from previous disease in the bowel, rather than to the operation itself, "which appears occasionally to have been uselessly done at the last extremity." He says "we should, therefore, have less hesitation in performing the extra-peritoneal (Amussat's operation) in an early stage of those cases in which it is called for, than we should if the section itself were attended with any serious risks to the patient's life."

Mr. Henry Smith, in his *Articles on Diseases of the Rectum*, would not advise the operation "in the last stage of the disease," even though sudden and complete obstruction should occur, but

it should take place in the early stages of the disease; and further says, the surgeon is only doing his duty if he recommends a procedure, which, although in itself surrounded with difficulty and danger, *may* yet prolong life for several months, at least, and allow the patient to die, at last, in comparative ease." This is the whole case, and is all the advocates of Colotomy expect.

I could detail the cases of Curling in his invaluable work on the *Treatment of Painful Cancer of the Rectum without Obstruction*, and quote, in conclusion, his words: "The operation is not intended to cure the disease, but for a purpose second in importance only to cure, namely, to relieve immediate suffering, and to prolong life." If the brightest pathologist of his day, Broussais, had lived to the period of the discovery of anæsthetic agents, he might have been made comfortable and his useful life prolonged by Colotomy. He was right in his diagnosis of his own case —"*tout est dans le rectum*"— as, after his death, four inches of the rectum, in its entire circumference, was found diseased, and the abdominal viscera, pectoral organs and brain were perfectly sound.

I close by a quotation from Curling: "The operation of Colotomy may be required not only on account of the difficulty experienced (in cancer) in obtaining relief from the bowels, but also *in consequence of the extreme misery produced by the disease*, and the surgeon is not justified in withholding from his patient even temporary relief from the great miseries I have described, which may be offered by this operation." I could add similar statements from Dr. Walter Hugh Walshe, of University College Hospital, London; Dr. Wm. Brinton, in his Croonian Lectures on Intestinal Obstructions; Mr. Samuel Solly's Surgical Experiences, London, 1865; Dr. Williams, of Dublin; Callisen, (who operated perpendicularly); Dr. N. Ward (who introduces a tube and fills the colon with fluid); and Gunther's *Lehre von dem operationem am Bauche*, with its truthful drawings illustrating the operation, *et mulitos alios*, but my only purpose is to show a firmness in the profession in this, as in many (not many equal it) diseases to give the patient the benefit of an operation, blessed in its ultimate results, however horrible to the eye of some in the act of its performance, or its subsequent annoyances from an artificial anus.

Lancaster, Ohio. Dr. Tom O. Edwards.

Chloral.

Dr. Liebreich's recent paper, at the Paris Academy of Sciences, on the action of Chloral, says it is a trichloride of aldehyde, and is soluble in water, and as in this solution it exercises no irritant effect, it is very suitable for absorption into the econ-

omy. It takes its place between Ether and Chloroform as an anæsthetic.

Experiments made on rabbits have given the most satisfactory results. Profound and calm sleep has been maintained for eight or ten hours, and Dr. Liebreich adds that the rabbits on awakening have manifested none of the usual results, and have proceeded to eat with avidity. — *Dublin Med. Press and Circular.*

Bromide of Potassium for the Sleeplessness of Infants.

M. Moutard-Martin has communicated to the French Academy of Medicine a memoir on "Some Applications of the Bromide of Potassium to the Medicine of Young Infants." Every one, he observes, admits the possession of sedative properties by the bromide, and in this direction it has become one of the most useful substances in the Materia Medica. Bearing in mind its hyposthenic action in erethism of the nervous system, and its innocuity, even in large doses, he believed that it might be employed with advantage in some of the pathological conditions of very young children. Among these, sleeplessness, alike mischievous to the infant and wearying to the nurse, is one of very common occurrence. The child does not seem otherwise ill, but has a very great insufficiency of sleep both by day and night, or only at night. Where a great variety of means has failed to remove this sleeplessness, the bromide succeeds in a remarkable manner, and M. Moutard-Martin adduces in his paper several cases in proof. His conclusions are: 1. The bromide of potassium given in small doses (from five to twenty centigrammes) is very well tolerated by young infants. 2. By its sedative action it cures *insomnia* in these cases. 3. Administered to infants suffering from the accidents of detention, such as restlessness, *insomnia*, cough, etc., it frequently relieves these; and it is probable that its employment, regulated with prudence, would sometimes prevent the occurrence of convulsions. 4. It should not be administered to infants when suffering from diarrhæa. 5. In certain exceptional cases, in which nervous erethism is predominant, its action is prompt and decisive.—*Medical Times and Gazette*, Dec. 12, 1868.

Use of Oil of Turpentine in Parasitic Diseases of the Head and in Traumatic Erysipelas.

For the destruction of the parasites which cause many scalp diseases, Küchenmeister has recommended alcohol, which retards the development of spores and fungi; but several experiments have proved that the operation of alcohol does not extend to the fungi vegetating in the hair-follicles. Tincture of iodine acts more certainly than alcohol on the fungous growths developed

in the hair follicles, as in herpes tonsurans, but it is necessary to shave the whole head, and to apply the tincture repeatedly, until the epidermis has been removed three or four times, and even then there are often disappointments in the cure, which in the most favorable cases requires 102 days. According to Professor Von Erlach, painting with oil of turpentine is much more certain and more rapid in its operations in these scalp affections, herpes tonsurans being cured within fifty days, and several cases of mentagra being cured in the same manner within a week. Since according to recent researches traumatic erysipelas is to be reckoned among the infectious diseases, and often resists the ordinary methods of treatment, Professor Lücke endeavors to destroy the infectious matter by a drug which penetrates deeply into the tissues, and for this purpose he paints the affected parts with oil of turpentine. He records a case in which this plan was successfully tried, and he states that it was also successful in eight other cases, the erysipelas disappearing in two or three days, whereas, formerly he had observed the most dangerous symptoms to occur in similar attacks. A very striking circumstance was the rapid fall of the temperature, in connection with the disappearance of the symptoms, and this reduction of the temperature was always manifested on the first application, and was the more certain in proportion to the energetic use of the remedy, and, therefore, it was especially observable after rubbing.—Prof. Von Erlach and Lucke, Berne.—*American Journal of the Medical Sciences.*

M. Latour on Animal Vaccination and Vaccinal Syphilis.

M. Latour, in the *Union Médicale*, after adverting to the isolated position in which this long debate has left M. Depaul, lays down the following propositions as the legitimate results that flow from it: 1. The degeneration of the Jennerian virus is far from being proved. 2. There does not exist a single authentic example of vaccinal syphilis, properly so called. 3. The excessively rare cases of syphilis inoculated by vaccination are explicable by conditions which completely exonerate the vaccine virus from all injurious mixture. 4. A large number of pretended examples of syphilis following vaccination justify the most serious doubts as to the accuracy of the diagnosis. 5. Animal vaccination, simply as another source of lymph, is deserving of encouragement, although it possesses no real or sensible advantage over vaccination from arm to arm.—*London Medical Times and Gazette.*

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVI. — NOVEMBER, 1869. — No. 20.

Original Translations.

ARTICLE I. — *Clinical Lectures upon Mental and Nervous Diseases; Alcoholism, Alcohol and Absinthe, Absinthic Epilepsy.* By M. MAGNAN, Sainte Anne, Paris.

BEFORE beginning the purely clinical investigation of alcoholic intoxication, either acute or chronic, it is necessary to take into consideration the mode of action of the poison upon the economy. For a long time it has been thought, and it is even now generally believed, that spirituous liquors: wines, brandies, liqueurs, cider, beers, act upon the organism in consequence of the alcohol which they contain, and in direct proportion to the quantity of this substance. Disregarding foreign matters, such as the salts of lead, copper, strychnia, even, introduced fraudulently into these beverages, it is necessary to know the action which pertains to each of the substances entering into the regular composition of drinks.

I shall now proceed to give you the exact details concerning one of the most commonly used spirituous liquors. I refer to Absinthe. Different processes are employed in the fabrication of these products. After having macerated, during a greater or less length of time, different substances in alcohol, the mass may

be distilled, and the essential portion of the liquid thus obtained; but, at present, the greater number of the manufacturers prepare the liquor cold, without distillation, they satisfy themselves with the use of certain essences which they mix, in greater or less quantity, with the alcohol. I have procured the formulæ of different manufacturers, and have been able to satisfy myself of the nearly uniform use of the same substance by nearly all of them. The differences concern more especially the quantities and qualities of the alcoholic excipient. The substances which, in addition to alcohol and absinth, enter intothe composition of the absinth liquor are star anise, anise, angelica, *calamus aromaticus*, origanum, sometimes balm, fennel and mint. These three last are added only by some manufacturers.

Now, gentlemen, let us examine what becomes of alcohol in the organism, and what are its effects. Alcohol, according to the theory of Liebig, considered as a respiratory, undergoes in the economy metamorphoses of successive oxydations which terminate, finally, in the production of water and carbonic acid.

MM. Bouchardat and Sandras,* by endorsing this doctrine, have rendered it classic; likewise, in 1860, when the remarkable work of MM. Lallemand, Perrin and Duroy† appeared, it was asserted, generally, that alcohol was an alimentary body, and was assimilated.

These authors, you know, combat, directly, the classic opinion, rob alcohol of its elementary properties, but they assign to it a direct and primary action upon the organism, and more particularly upon the nervous centres. They admit that alcohol penetrates into the economy, remains there in its natural state, and is eliminated without undergoing the least modification: that it escapes, as it enters, in the state of alcohol.

In the face of two doctrines so opposite, both based upon investigations carefully conducted, it becomes necessary to examine upon which side the truth is to be found, or even to determine the part to be assigned to each one of these opinions; the more so, as accurate ideas about alcohol will be of great service

* *Annales de Chimie et de Physique.* 1847.

† Lallemand, Perrin et Duroy. 1860. *Du rôle de l'alcool et des anesthetiques dans l'organisme.*

in the establishment of therapeutical indications. Permit me, then, to delay one moment for their discussion.

It may be said that, in favor of the old theory, there is no direct demonstration. This phase of the subject, corresponding to what is admitted about the chemical phenomena of digestion, it seems to be so likewise of them. Efforts have been made to detect in the economy the products of the different transformations assumed by alcohol under the influence of successive oxidations; but the results have not been very conclusive. MM. Bouchardat and Sandras, with great difficulty, succeeded in detecting the existence of one of the intermediate products, acetic acid, in the blood of alcoholized animals; they recognized it by its odor, and by a very slight acid reaction.

On the other hand, Duckel, of Prague, asserted that aldehyde could be detected in the blood; that aldehyde was rapidly transformed, and would give origin to the reproduction of acetates and oxydates; that thus, by a series of duplications, the formation of water and carbonic acid was reached. But these isolated investigations have not, to my knowledge, received the support of recent analysis. Moreover, as the quantities of alcohol eliminated, invariably differ widely from the doses administered, the partizans of the theory of Liebeg are strengthened by the well-known fact; we shall see what is to be concluded from it.

Let us examine, first, the evidence advanced by MM. Lallemand, Perrin and Duroy, in support of their theory. These authors demonstrated, on the one hand, the presence of alcohol, unchanged, in the economy; on the other, its elimination by the different excretory channels, the kidneys, the lungs, the skin.

MM. Bouchardat and Sandras, who had likewise determined the presence of alcohol in the products of the pulmonary exhalation, have detected none of it in the urine; but the majority of experimenters have observed it there. M. Baudot,* in particular, one of the most zealous defenders of the old theory, declares, in one of his analyses, that a man having swallowed three hundred and five cubic centimetres of alcohol, evacuated ten cubic centimetres of it in two kilogrammes of urine passed in about twenty hours. He rests, indeed, upon this scanty elimination by the urine, in

* *Union Médicale*, 1863, 1864. De l'alcool, de sa destruction dans l'organisme.

order to arrive at the conclusion that a large portion of the alcohol must necessarily be destroyed. It has been said, weigh first, weigh afterwards, and then decide. This argument of the scales, gentlemen, is more specious than solid. Doubtless, it is possible to determine, with sufficient accuracy, the quantity of alcohol eliminated by the urine, but the capacity, and especially the duration, of the elimination by the pulmonary and cutaneous channels is entirely ignored.

You see before you a dog plunged, at this moment, into a state of alcoholic intoxication; approach his nostrils, you will receive, at each expiration, puffs of alcoholic vapor.

This elimination will continue with the same degree of intensity during three or four hours; after which it diminishes; but frequently, it is possible, after the expiration of ten or twelve hours from the beginning of the experiment, to determine, by its odor, the presence of alcohol in the expired air; and this, certainly, is not the latest period of the elimination, since alcohol can be detected, we have ascertained it personally, in the organs and in the blood of persons dead three or four days after their last debauch.

At first more active, the elimination diminishes gradually, and terminates by becoming nearly insensible, but it does not the less continue, although its intensity can scarcely be appreciated.

To these direct proofs of the persistence of alcohol in the economy, we will add indirect proofs quite as important. If the alcohol were transformed, the successive oxydations could not be accomplished without inducing modifications of calorification and in the formation of certain products; in other words, we ought to observe an elevation of temperature, and augmentation of carbonic acid, an augmentation likewise of urea; chemical observation and experiment prove directly the contrary.

MM. Lallemand, Perrin and Duroy indicate a diminution of temperature of scarcely a degree, in animals submitted to the action of alcoholic liquors. Edward Smith also mentions a cooling of the body, under the same circumstances. But already — in 1848 — MM. Dumeril and Dumarquay had pointed out a considerable reduction of the temperature of animals submitted to the action of alcohol; and, in one of their experiments, they had succeeded in detecting, at the end of three hours, a difference

of 9.°6, in a dog to which they had administered 125 grammes (about 4 ounces) of alcohol.

This cooling is more marked than that resulting from ether or chloroform.

We have personally noted, in our experiments, a depression of 3.°5 in animals plunged into alcoholic intoxication of medium intensity, and insufficient to produce death.

Clinical observation, likewise, supplies us with examples, no less remarkable, of diminution of the temperature of the body under the influence of alcoholic drinks. I owe to the courtesy of M. Duquet, chief of clinic to the faculty, the following report of a case of alcoholic intoxication, in which the depression was carried to the utmost limits. The subject was a female, aged thirty-years, of a vigorous constitution, who, on the third of March, 1869, at 10 A.M., was brought to la Pitié, St. Charles ward, No. 14, under the charge of M. Peter. This woman, after having, on the previous evening, indulged in copious libations (potations?), was lost in the country, in the neighborhood of Ivry. She had passed the night under a freezing, drenching rain; at about three o'clock in the morning, had been seen wandering, by some farm laborers. At six o'clock, she had been found, lying cold and senseless, in a ditch.

On arriving at the hospital, there was complete coma, and considerable superficial coldness; almost complete abolition of sensibility; the arms and legs were agitated by slight convulsive movements, feeble in character, as it were twistings, or rather a sort of crawling in all directions; the force expressed in these movements was considerable; the pulse was full and regular, but infrequent. *The temperature, tested carefully at the moment of inspection, indicated twenty-six degrees* (Centigrade, 55.12° Fahrenheit), *in the axilla and vagina.*

The patient placed in bed, was warmed by means of hot bricks; and stimulating drinks were administered. Gradually, the convulsive phenomena ceased, the temperature of the body was insensibly elevated, and the patient recovered consciousness at half-past four P.M.

From this moment, all the functions were reëstablished rapidly, and her return to health was affected sufficiently to admit of her discharge from the hospital on the following day.

M. Hirne, clinical statistician, registered the temperature at different intervals, from the first examination, which gave 26°. The scale below exhibits the gradual elevation:

Hour.	*Vaginal Temperature.*	*Axillary Temperature.*
11.30	27.°9	27.°9
12.30	28.°7	28.°6
12.45	30.°4	30.°
1.15	30.°9	31.°1
3.15	34.°4	34.°3
4.20		36 °3

While assigning even a very important part to the action of cold, it is impossible to avoid recognizing the influence of spirituous liquors in this diminution of nearly 11 degrees.

You perceive the demonstration is complete, as far as regards temperature; on the other hand, the investigations of Bocker* of Vierordt, of Lehman, of MM. Perrin show that the quantity of carbonic acid is less, and that the diminution is in direct ratio to the dose of alcohol imbibed. Finally, the urine does not contain an increased quantity of urea. Certain observers, Bokes, especially, notice even a slight diminution.

You perceive, gentlemen, abundant evidence in favor of the new theory, and it would be a strange error to consider alcohol eliminated as a complete superfluity, as a simple excess of which the economy should be freed. We do not believe, however, that it is necessary to repeat, altogether, the idea of the possible transformation of a portion of the alcohol. The disagreeable acescence which accompanies drunkenness, should be alone sufficient to indicate changes occurring, even before its absorption in the circulation. To sum up, the principal fact, that which occupies the most prominent position, is the passage of alcohol through the organism, and its escape in a natural state through the different excretory channels; hence its invariably uniform action, direct and immediate, upon the different organs, and more especially upon the nervous centres.

A secondary, accessory fact is the transformation of a small portion only of the digested alcohol.

Knowing, now, the manner in which alcohol acts, let us

*Archives General de Médècine. 1849.

investigate the immediate phenomena to which it gives rise, in doses slightly increased.

Under its influence, muscular action, at the end of some minutes, escapes from the control of the will; the animal staggers: the paws overlap, especially the hinder ones, one or the other gives way, and the body falls upon its side; at first, the animal is able to raise himself, and resumes his equilibrium, which he soon loses again in the same manner; next, his two hind paws bend, and are drawn up under the animal, who, raised upon his fore-paws, endeavors to crawl, dragging along with difficulty his posterior extremities.

Gradually, the paralysis overtakes the posterior portions of the body; the animal presents a condition of complete relaxation, and is soon plunged into a comatose sleep; if awakened, he relapses like an inert mass, the limbs pendulous, and the head likewise, all elasticity being abolished; next alvine evacuations and vomitings occur, and the subject, completely intoxicated, remains prostrate in the midst of his evacuations.

The thermometer placed in the rectum indicates a considerable reduction of temperature; the breath exhales a decided alcoholic odor.

The urine of animals, submitted temporarily to the action of alcohol, presents no traces of albumen. These phenomena persist during variable periods, which may be extended to three or four hours, and even more; after which the return to health proceeds slowly, when the animal, on awakening, resumes, as soon as he can, his habitual movements.

Under some circumstances, all is not over; pulmonary or cerebral complications ensue, which may become rapidly fatal.

It has been sought to determine if the different varieties of alcohol had different effects. Analogous phenomena have been determined for all, but varying in intensity according to the quality of the alcohol. Thus M. Cros, in his thesis, shows, by experiments upon rabbits, pigeons, and upon men, that amylic alcohol, in equal doses, develops much more decided phenomena than vinous alcohol; but the general character of the symptoms remains nearly the same. Its topical effect upon the digestive canal has been observed to be irritative and more energetic.

A very important fact, gentlemen, to which I desire to direct

your attention in an especial manner, is, that in a considerable number of experiments made with alcohol, there has been no recorded observation of the appearance of epileptic or epileptiform convulsions. You will hence perceive the necessity of seeking elsewhere than in the immediate effect of alcohol, the cause of epilepsy in acute alcoholism.

M. Magnan presented a series of different animals submitted to alcoholic intoxication in various degrees. These animals evinced the phenomena which have just been discussed. In addition, there was remarked, in the case of a guinea-pig, besides this paraplegia, slight tremor of the paws; this tremor which was not perceptible in every case, ceased generally when the animal was in a comatose sleep.

We now perceive, continued M. Magnan, the anatomical modifications to which acute alcoholic intoxication gives origin.

For a long time, hitherto, the presence of alcohol has been detected in the nervous centres. Ogston discovered it in the brain of a drunken woman; M. Jardien and others have observed the alcoholic odor exhaled by the brain of persons who have died in a drunken condition. But the investigations of M. Lallemand, Perrin and Duroy have contributed especially to establish a clear demonstration of the presence of alcohol in the different organs, and in the blood. For our own part, in 1864, we had, at the Bicêtre, the opportunity to repeat these analyses, with the coöperation of M. Belin, pharmaceutical interne. He determined in man, and also in animals submitted to experiment, the presence of alcohol in the brain and spinal cord, in the liver, in the blood, and likewise, but in very small quantity, in the lungs and in the kidneys.

From the analyses made at St. Anne, with M. Chatenier, pharmaceutical interne, we have arrived at the same result. We have obtained from different organs, by distillation, products having the physical and chemical properties of alcohol. With the test-liquor,

Bichromate of Potass	1
Sulphuric acid	30

A magnificent emerald green color is obtained, chromic acid gives a black tint; ammoniac a blackish-brown deposit. The

distilled liquor exhaled an alcoholic odor, and the vapors took fire from the light of a candle, producing bluish flames, like ordinary alcohol.

Spirituous liquors are not distributed equally and uniformly throughout the organism; certain organs appear to have a particular affinity for these substances, and store them up in greater quantity. It is well to observe, however, that the channel of absorption has a definite influence upon the more particular accumulation of alcohol in certain organs. Thus, when absorption was effected through the pulmonary mucous surface, or through the veins, the poison is found in greater quantity in the nervous centres. When, on the contrary, the liquids are introduced into the stomach, the portal vein carries toward the liver the substances contained in the gastric cavity, and the liver then becomes richest in alcohol. The blood falls into the third rank; then the kidneys, and the lungs.

The cerebro-spinal membranes are injected, frequently suggillations are perceived, little sanguineous infiltrations into the thickness of the pia-meter; sometimes even a little blood spread out in a layer upon the surface of the arachnoid.

These meningial hæmorrhages have appeared to me the more common in men than in animals. The brain and the spinal cord are generally injected; the gray substance, whether at the periphery or the centre, assumes a rosy color, more or less deep, and, under some circumstances, a very remarkable tint, like the meat of ham.

The mucous membrane of the stomach presents, almost always, in animals, a vivid injection, sometimes little ecchymotic patches, and sometimes hæmorrhages, either under the membrane, within its thickness, or upon the surface; and then small ulcerations may be discovered, covered with blackish clots.

The intestines present a variable degree of injection, which is arrested, generally, in the upper portion of the small intestine. It is not rare to find in the lungs reddish patches, congested, sometimes also with apopleptic points; but these lesions are always disseminated.

The liver and the kidneys are injected, but they are very rarely the seat of hæmorrhages.

§ II.—When an animal is submitted to the prolonged action of alcohol, the phenomena which we have just indicated will be seen to supervene after each administration of the poison, and, in addition, certain symptoms, which are not met with in simple drunkenness.

A vigorous dog, two and a half years old, weighing 16 killogrammes, took, during about two months, a daily dose of 60 grammes of alcohol. Each time, eight to fifteen minutes after the injection of the toxic liquid, the animal staggered, falls collapsed, in a state of complete resolution, with relaxation of the sphincters; he fell into a comatose sleep, of which the duration from the commencement scarcely exceeded two or three hours. At the beginning of the poisoning process, immediately on awakening, the normal state returned quite rapidly; but from the second month, in proportion as the chronic intoxication progressed, the animal preserved always a slight hebetude.

A symptom especially worthy of arresting the attention, and which suggests a certain resemblance to *delirium tremens* in man, is the appearance of tremor, which, manifesting itself first in the paws, gradually becomes general, involving the muscles of the neck and of the trunk, in the last fortnight. This tremor, which was persistent during a greater portion of the day, did not entirely disappear during the comatose sleep. Every morning the stomach was found to be filled with mucus; the cleansing of the orifice of the gastric canula, permitted the escape therefrom of a stream of liquid, viscous and adhesive, analogous to the pituitary secretion of drunkards. Upon several occasions, during the course of these experiments, I increased the dose of alcohol to 70 and even to 75 grammes. This addition of from ten to fifteen grammes to the habitual dose sufficed to induce symptoms whose intensity was altogether disproportioned to this slight additional quantity.

A degree of saturation had been reached which could not be exceeded. In man, as is well known, the same condition exists.

Autopsy shows a thickening of the gastric tunics. The mucous surface, of a reddish-brown, is covered with a layer of thick tenacious, vitreous mucus, streaked with blood at intervals; upon cleansing this surface, by means of a stream of water, small ulcerations were seen below, with irregular borders, and in some places,

cicatrized portions in the form of irregular, grayish patches. In the thickness of the mucous membrane, sanguineous infiltrations were observed, some spread out in sheets, others collected in little foci. The liver presented a general yellowish tint, studded with more deeply colored points in the centre of the lobules. The kidneys had already assumed incipient fatty degeneration, especially in the cortical layer, and in the columns of Bertini. The cavities of the heart, especially those of the right side, and the venæ cavæ were distended, and filled with blackish clots.

The lungs exhibited some sub-pleural ecchymoses. The membranes, slightly œdematous, presented a rosy color at the level of the chiasma. The cerebral substance was a little injected. Chemical analysis revealed the presence of alcohol in the organs, and the microscopic examination permitted a more thorough investigation of the fatty degeneration of the liver and of the kidneys. Although this dog had not lived a sufficiently long time to manifest the very advanced lesions of chronic alcoholism, nevertheless, what we discovered sufficed to give us an idea of those lesions which presented themselves in the animal, with characters analogous to those habitually encountered in man.

In an oral communication, M. Leidersdorf, of Vienna, informed me that Dr. Kremiansky, having fed young dogs with alcoholic soups, had succeeded, in the course of a few months, in producing in these animals cerebral pachymeningitis, a lesion which is well known to be not infrequent in chronic alcoholism.

Amputation by the Ecraseur.

M. Bardinet, of Limoges, in the *Bulletin Général Thérapeutique.* for June 15th, recommends the *Ecraseur* as a means of performing amputation of the limbs, and states that he has in this way removed the leg. In operating, he first cuts through the skin, and then divides the tissues, in separate portions, by the *Ecraseur*, from without inward. Lastly, the bone is sawn through. M. Chassaignac in a note to the editor of the *Bulletin*, says that, though he has used the *Ecraseur* successfully in two cases of amputation of the thigh, he does not consider this instrument suitable for amputations in general, inasmuch as it is not capable of ready application in all cases.—*N. Y. Med. Jour.*

Foreign Items.

On the 1st of September, during the discussion upon vaccination, which has occupied the attention of the Imperial Academy of Medicine (Paris) during a portion of every session, for several months past, M. Ricord made the following observations: "There are now under discussion two species, or rather two sources of vaccine, with but one and the same virus. The first, which we have from Jenner, is asserted to be degenerated. MM. Guérin, Bousquet, and Vernois have treated this question too thoroughly to permit its recall. I do not believe in the degeneration of vaccine; I attribute the differences observed to the soil, rather than to the grain. But another stigma is affixed to human vaccine. If, they say, it has not degenerated, it has become vitiated; it has become compromised by being united with another virus; in a word, they present to us vaccinal-syphilis. The mode of transmission of syphilis has been a long time denied and neglected by the Academy itself. I ask of M. Depaul, who has made an immense number of vaccinations, if he took all the minute precautions which would avail to prevent such an accident? Certainly not; he did not so occupy himself, he did not think of them; his reports do not contain a single word upon this subject, previous to what might be called the Italian Epidemic.

"To sum up, then, vaccinal-syphilis is very rare, excessively rare, very difficult to reproduce, even when the inoculation is performed with vaccine from subjects notoriously syphilitic.

"Moreover, at one time, nothing was talked of but vaccinal-syphilis; facts of this sort were multiplied infinitely; following these indications, it might have been supposed that vaccinal-syphilis would soon replace vaccine. This has been considerably exaggerated. A large number of observations have aggregated which presented no traces of syphilis. Moreover, M. Depaul himself has told you, when we begin to investigate a subject we take whatever we can, subsequently we reject a portion of these doubtful facts, which had previously been accepted.

"Like M. Guérin, I am astonished at one thing. I cannot

restrain my surprise at the great number of children cured without treatment, after having had this pseudo vaccinal-syphilis.

"We know, concerning infantile syphilis, however great its gravity, what extreme difficulties we experience in curing it by specific treatment carefully managed, and long continued. I know that it has been said, 'We must distinguish between congenital and inoculated infantile syphilis: the first is much more grave, because it seizes the infant before it has sufficient vigor to resist.' So they say; but is syphilis inoculated into infants benignant? Certainly not, as much as it might be. I can assert that it is severe, very severe, altogether as grave, at the least, as any other sort. It is said further that syphilis, inoculated, should be weaker in consequence of the inoculation; but when it is taken by contact at its habitual source, it is inoculated; we must not delude ourselves upon this point. An old author, Boerhave, I think, has expressed the contrary opinion to that which is at present held; according to him, syphilis would be much more severe, were it not acquired in the habitual way.

"Permit me to recall to you, that when I did not believe in the contagion of secondary lesions, when the effort was made to prove this against me and to combat my opinions, all the cases of syphilis produced by inoculation of secondary lesions were of the most severe character, nurses infected by their nurselings were lost women (femmes perdues); now the point of observation has been changed, and these same facts have become most benign. Let us, then, acknowledge the truth, that in children, as in adults, syphilis may be mild or severe, but that whether inoculated or not, it is always less easy to cure in young infants, because they offer less resistance. In my own mind, this is a well established conviction, based upon long practical experience.

"I do not admit the pretended benignity of infantile syphilis.

"M. Guérin, on his part, has, perhaps, exaggerated a little in the other direction. He has nearly reached the conclusion that the diagnosis of syphilis was very vague and uncertain. I know nothing, on the contrary, in medicine or surgery, more easy to diagnose than syphilis, in the vast majority of cases; primary phenomena, indurated chancre, then adenopathia and secondary and tertiary lesions more or less remote; when this picture is presented to the view, it is difficult to be deceived. I know very

well, that it may happen that we may be satisfied with insufficient evidence; here, even, in the Academy cases have been presented which were deceptive from too great precipitation. But we are rarely deceived, deliberately. Thus I myself have been forced to admit the reality of vaccinal-syphilis, in spite of all my repugnance. Facts have constrained me thereto. They have been presented to me with characteristics which did not admit of doubt, for I described them myself. I decided that I was deceived, and I acknowledged it. I know nothing more agreeable than to recognize an error which has been demonstrated by one's own rules. I therefore now admit the possible transmission of syphilis by vaccination. But I must say it, it is something which has thus far escaped me. I have not yet been able to discover in published observations, the first '*vaccino-siphiliphere*.'

"In those of the 2nd or 3rd hand, that is alone sufficient, for inoculation produces a chancre, which itself becomes a source of syphilis. But can the first, which was itself the subject of constitutional syphilis, develop in itself any syphilitic lesion at the vaccinated point? It is a curious fact, that upon those who are constitutionally syphilitic, all possible operations may be performed without any modification of their results by syphilis. For my own part I have never seen, in my long practice, that it exercised the least influence. I have removed tonsils covered with mucous tubercles, performed amputations, castrations, etc., without finding the cures retarded or the cicatrization less perfect than in non-syphilitic subjects. I have never seen a vaccinal pustule become chancrous.

"M. Depaul — It never becomes such.

"M. Ricord — I am happy to be, upon this point, of the same opinion as M. Depaul.

"It has been said, and it appears just at the first glance, is it necessary to know the source from which a disease is drawn, in order to recognize it? No, doubtless; and it happens to me every day to recognize the pox without knowing from whence it is derived. But is it, then, absolutely a matter of indifference to trace it to its source? By no means; frequently, it would be very interesting to study it. I should like very much to study the vaccinal pustule which supplies the virus contaminated by syphilis.

"Vaccinal-syphilis admitted, and I repeat it, I do admit it, what is its mechanism? What are its pathogenic conditions? Is there a union of the two species of virus, with a hybrid product? Certainly not. Are they then placed parallel? It is possible. There is one point upon which I insist; the question of the blood and its agency in the transmission of syphilis. I believe it impossible for the most adroit to avoid the blood in collecting vaccine upon his lancet. I have asked, from the Academy, the purest possible vaccine virus, with special reference to this point. I have submitted it to M. Robin; it contained numerous globules of blood.

"M. Depaul — It is always so under the microscope; blood globules are always detected in the purest vaccine.

"I am happy to be again confirmed in my opinion by the authority of M. Depaul. Thus when they picture for us pure vaccine in the vaccinal pustule, and syphilis in the sub-soil, if the expression may be permitted, they invoke theoretical subtleties based upon nothing at all, and which, moreover, possess the serious inconvenience of endangering the vaccinator, if syphilis should manifest itself in the vaccinated child. It may be believed that he has not taken the necessary precautions, or again that he has taken them all; that he has neglected to avoid blood; then that it was impossible to avoid it. It must be said, if syphilis can come from a vaccine pustule, it may be derived from the vaccine as well as from the blood.

"I now come to cow-pox. Its panegyric has been too recently pronounced by M. Depaul to admit of its repetition. M. Herard, moreover, has traced between it and the Jennerian virus, a relation which has shown with sufficient clearness their possession of equal qualities. Here, at least, there is no fear of syphilis, for the animal is exempt. I was one of a committee, which made every possible effort to inoculate syphilis into the cow, without success. This is certainly an advantage. But may not the cow-pox at some time have its contamination? Animals have diseases which are communicated to men.

"To conclude, vaccinal syphilis is rare. Neither human vaccine nor the cow-pox should be rejected. They should both be investigated, and at the same time propagated.

Hospital Reports.

ARTICLE I. — *Cook County Hospital.* Reported by CURTIS T. FENN, M.D.

THE following is a brief summary of reports for the month of September, 1869:

There were in the Medical Department, at the beginning of the month, 38; admitted during the month, 74; discharged cured, 36; discharged relieved, 5; sent to the County House, 2; absconded, 1; died, 16; remaining, 52.

In the Surgical Department at the beginning of the month, 33; admitted, 14; discharged cured, 20; discharged relieved, 1; discharged incurable, 1; died, 2; remaining, 23.

In the Gynæcological Department at the beginning of the month, 19; admitted, 17; discharged cured, 9; discharged relieved, 2; absconded, 1; died, 1; remaining, 23; births, 16.

In the Ophthalmic and Aural Department at the beginning of the month, 17; admitted, 5; discharged cured, 2; discharged relieved, 2; absconded, 1; remaining, 19.

Total at the beginning of the month, 107; admitted, 112; discharged cured, 67; discharged relieved, 10; discharged incurable, 1; absconded, 3; sent to County House, 2; died, 19; remaining, 117.

There were in the Gynæcological Department at the beginning of September, 1868, 13; admitted, 15; discharged cured, 3; at own request, 1; absconded, 1; died, 1; remaining, 23; births, 8.

An increase equal at least to that, has occurred in each of the other departments. Two new wards have been provided, lately, by alterations in the basement, the only extension possible at present. There is reason to believe that even with double the room now afforded, needy sufferers would soon be in excess of places to receive them.

Of course the labor of the attendants is increasing. The house physician and his two assistants, carry a great responsibility, with credit to all concerned, be it said. Registration, diet lists, prescriptions, surgical dressings, midwifery, *post mortems*, monthly reports, run up a startling aggregate of work each month. If the hospital did no more than complete the education of its internes,

it would fill a good mission. The breadth of experience, the coolness and efficiency acquired by contact day and night for a year and a half, with such an accumulation of humanity in mortal combat, is a proper finish to a medical education. The hospital imparts more than lectures, or books, or travel. The interne is taken into the closest intimacy with suffering and death. He comes face to face with what years of private practice will but slowly unfold. Experience, if waited for, generally arrives so late as to serve but a brief space, when other knowledge with which it ought to be joined, has faded from memory. Some things are gained by patient, slow, laborious plodding. But much that a medical man must ever hold as the highest and best attainment, is reached intuitively. There is a capacity which amounts to genius, in the majority of those who adopt the study of medicine. It seeks recognition in affinity for clinics and autopsies. This eagerness is not morbid curiosity. It is enthusiasm urging them to come eye to eye with their work. It is an exchange of civilities between nature and her votaries. With his five senses, under favoring circumstances, one will intuitively arrive at clearer perceptions of truth than wordy sketches or diagrams, or models, will ever convey. The student desires the presence of nature. This enthusiasm ought to be gratified early. In its track books become illuminated. Readiness to recognize facts: focusing of all the intelligence upon objects, is a proof of genius. Facts rob theories of undue proportions. The hospital, in a word, is a great teacher. Its grand object-lessons never become stale. The truths they utter flash upon the mind at once. Teachable souls are there admitted to the secret of the Almighty.

We are never surprised, therefore, that a large number of graduates annually seek the appointment of interne. It is to perfect a foundation for future study — acquaintance with actual, tangible facts, such as appeal to us in pallid faces and vacant cots.

The house physician is now required to keep a reference file for each ward. Every important case is entered upon a slip of paper; previous and current history noted, and this slip is filed. When removed, it is pasted in a scrap-book. This tax upon him is one of the most important in the way of discipline, and affords a valuable accession to the records of the hospital.

Cliniques are again in vogue: two Medical, two Surgical, one Ophthalmic, one Gynæcological or Dermatological each week.

Prof. Johnson conducts the Medical clinique at 1.30, and Prof. Powell the Surgical clinique at 2.30, Tuesdays and Fridays.

Dr. J. H. Hildreth holds a clinique at 1.30, and either Dr. H. W. Jones or Dr. C. G. Smith at 2.30 Saturdays.

A large body of students from the different Medical Colleges are in attendance. Medical practitioners from the city and country are always ready to attend. The fund received by the sale of tickets has been large, and is appropriated towards paying current expenses. The mission of the County Hospital is a noble one, not only in regard to its influence as an educational means, but also as an institution of public charity. We bespeak for it whatever will promote the convenience of its attending and resident physicians. A small sum taken from the income of tickets annually, and appropriated to the general good, might be used to materially lighten the burden of those who are called to serve.

Society Reports.

Article I.—*Intemperance as a Disease.*

[We are indebted to Dr. Parrish, of Media, Penn., for the following *Report of the Committee on Intemperance as a Disease*, read before the State Medical Society of Pennsylvania at its recent session.—Ed.]

Report.—The statement that there *is* a "medical aspect" to this subject, presupposes that intoxication, either from alcohol or opium, is, in some of its phases, a disease; and if this be true, it is an interesting inquiry how far this fact modifies the relation of the subject to morals and law.

In the very outset, we find ourselves confronted by recognized authorities in law and morals which, while they may not deny that intemperance is sometimes a disease, still deal with it exclusively as an offence against law and morality.

In this respect, it is an anomaly in our profession, because not only has it positive and well-defined symptoms by which even non-professional observers can distinguish it, but it is made a punishable offence against common decency and public order. Your committee therefore find it difficult to reconcile this peculiarity of the subject with the ordinary methods of professional

thought and inquiry as related to other diseases which have no such embarrassments.

There are, however, distinct forms and varieties of alcoholic excess, which are well defined, and which we propose briefly to notice. Of that class of men who take their wine, as Cowper did his tea, "to cheer, but not to inebriate," we shall not speak. These are technically known as moderate drinkers, and are not necessarily subjects, on that account, for medical observation and treatment.

There are, however, at least three other classes:

1. The occasional drinker, who sometimes, but seldom, crosses the boundaries of sobriety.

2. The periodical drinker, who, at intervals, throws the reins on the neck of appetite, abandons himself to his passion for excitants, and who may do so almost unconsciously, or with deliberate intent and purpose.

3. The habitual drinker, who indulges without deliberation or without sudden impulse, but because there is an appetite which has corrupted his constitution, and made him a victim to a habit which he can not of himself overcome.

The multitudes of persons who are addicted to these several forms of inebriation, and the terrible consequences of the disease upon the domestic and industrial interests of the world, render its discussion one of the most important which can claim our thought. It seems to your committee to be a medical and physiological question, which should be studied as any other medical question; and in whatever legislation may be required concerning it, that this fact should be recognized.

Causes.—Your committee are further of the opinion that there are constitutional tendencies inherent in mankind to seek artificial support. In vindication of this statement, we find that in every soil and climate there is some indigenous product from which man, whatever be the stage of his civilization, extracts an intoxicating ingredient. The rudest people of the globe, without any of the appliances of modern art or science, are not so rude and uncultivated, that they do not manufacture alcoholic liquors from the growth of their fields; and we know of no nation or people on the earth among whom intoxication is not a common vice. There is a demand for intoxicants, and there is a supply.

Accepting this fact of history, comparing it with the experience of our own time, and noting the evidences which are daily presented to us in the practice of our profession, we are convinced. beyond doubt or controversy, that there does exist in men a tendency to the use of exhilarating beverages or narcotic drugs.

Man, frequently uneasy and restless, naturally longs for and seeks something to raise him from suffering, and elevate him to what he discovers to be a *pleasurable point* of feeling; a point

which he may obtain from various sources, according to his tastes or inclinations. Sometimes it may be found in the pursuit of art, science, literature, or society; and frequently in the productions of the animal and vegetable world.

The prudent man, especially if he be a man of domestic habits, may be content with the exhilaration afforded by his tea or coffee, and his cigar. One may be satisfied with home-made wine, cider, or beer; another thinks he requires a stronger stimulant, and another a still stronger, who partakes of more dangerous varieties, till he becomes narcotized or drunken.

Whisky and brandy are the intoxicants of America, Russia, Scotland, and Ireland; ale and beer, of England, Germany, Japan, and Egypt; wine, of France and Italy; bouza, of Nubia; pulque, of Mexico; tuka, of Kamschatka; betil, of Polynesia; arrack, of Africa and Hindoostan; opium and shamshu of China and Turkey; bangue and hashish, of Arabia and the Grecian Archipelago; coca leaves, of Peru; palm leaves, of the palm countries; hyoscyamus, of Syria; rue, of the Crimean valley; and, in more recent times, ether and chloroform among the cultivated and refined of our own country.

It thus appears clear that the production of intoxicating beverages or drugs is restricted to no country or clime. It is as widely spread as the existence of language. Wherever we find a national speech, there we as certainly find a national intoxicant; nor does this remark apply only to the present age, but, as far as the voice of history can be heard, it applies to *every* age of the world. Whence this universality of production? How happens it that, in every country and clime, plants grow, which are capable of yielding intoxicating products — such products as possess the threefold quality of exhilarant, roborant, and anodyne, and which are either deleterious or beneficial according to the quantity used? Observe the adaptation. Man, says a poet and philosopher, is at once "*the child and sure heir of pain.*" He needs many a time such a draught as may exhilarate, strengthen, or compose. Nature, aided by human ingenuity, supplies it. Shall we say that man must not partake of these products? Let us consider. Nature offers them with a liberal hand. There is within man a sense of want, which bids him partake. Nature, however, human experience, our own observation, and the moral law, prescribe the limit — *moderation;* beyond which, suffering is the result.

In view of the wide-spread evils resulting from the careless and indiscriminate use of such beverages, it seems to be the province of the medical profession to recommend only the common use of such as experience has proved to be safe, and abstinence from those known to be injurious.

A philosophic writer has said: "*Every inordinate cup is unblest, and the ingredient is a devil.*"

Unhappily, men do not partake in moderation, and therefore must, and do, endure the penalty. With a "demon" in the breast, their sufferings are fearful, till even *death* seems a shelter from the agony of a lacerated constitution and an avenging conscience. In this category falls the habitual drunkard.

What is our duty towards him? What prescription has the medical fraternity that shall meet his case? Are there any means even to restore partially our brother man to ease and serenity, and to throw around his spirit a shadow of hope even for corporal salvation? We believe there are such means.

The popular cry is, "Remove the cause." If we ask for the cause, the answer is, "The dramshops, and the law by which they are authorized and sustained." In view, however, of the momentous facts already referred to, your committee must take a broader and deeper view of the causes which underlie this evil. It is alike unphilosophical and unjust to classify social usages and dramshops as the chief causes of intemperance. They are temptations, *not* causes; temptations which are in the way of sober people as well as of those who drink. In dealing with this subject, we should be careful in the use of terms, and understand the terms we use.

A cause is an *invariable antecedent.* Drinking at dramshops or in social circles does not invariably antecede the habit of drunkenness, but a susceptibility or capacity for such a condition must always exist in the person who becomes an inebriate. The dramshop or social glass may only be the occasion.

Some forms of intoxication are peculiarly exclusive. The custom of "treating" at public bars is applicable only to a class. The habitual drinker indulges at home, in his office or place of business, at particular times and under circumstances of unusual effort or exposure. He does not think of depending upon invitations and associations for the enjoyment of his accustomed draught. With him the demand is from within; a craving analogous to that of hunger, which he feels must be satisfied or he is unfitted for the service of life.

Many a periodical inebriate carries liquor to his room, and remains for days, and even weeks, in seclusion, while he passes through the satisfying narcotism which obliterates all thought and care from his mind, and puts his body in a condition of protracted slumber and repose.

Opium-using is a secret vice. Hashish is used privately, and ether and chloroform are inhaled in solitary places.

In considering this matter, it is well also to bear in mind the fact that the majority of persons who are exposed to these temptations do not become inebriates. In other words, they are either free from the desire for such indulgence, or they have moral power sufficient to enable them to subdue and control their appe-

tites. Only those people become drunken who possess the susceptibilities and tendencies which incline them to seek excitants, and who, on that account, are more likely to yield to temptation. Why do some men drink to excess? Why do others, who are exposed to the same temptations, abstain from drinking at all? When we reach the difference between these two classes of persons, we reach causes.

It is therefore respectfully submitted that if intemperance is an offence, an immorality, the distinction is unfair which reproaches the man who establishes the habit of intoxication by the use of alcoholic liquors, while he who does the same thing by the use of opium or other drug is relieved of such reproach.

When we consider the damaging influence of the opium habit especially, how it degenerates the nervous force, demoralizes manhood, and paralyzes labor—how it holds its victim a bondman, with no intermission of freedom and no promise of escape—it is difficult to comprehend the ethical code which passes such slavery by as innocent, and yet holds the less serious case as guilty.

The singular compounding of these diseased conditions with judicial opprobrium and public disgrace, is a point which we feel called upon to notice.

Civil Aspect.—This brings us to the civil aspect of the subject. The time was when insane persons were punished; they were victims of an unrighteous law and a bitter public sentiment. They were chained, beaten, and starved, and the madhouses were Bedlams where the hard hand of tyranny crushed the sad victims of mental disorder. Nor was it until the benign attributes of the medical profession were brought to bear upon the subject of insanity, that its treatment was transferred from the prison-keeper to the doctor of medicine.

What was true of the insane a century ago, is, with some modification, true of the drunkard now. The law regards him as an offender, subjects him to arrest and fine, or imprisonment, and the public looks upon him as a nuisance and burden. His sorrows are made texts for sermons; his eccentricities are caricatured by itinerant lecturers; his bruises and scars are pictured for public stereoscopic displays; and the tendency of the popular teaching of the day is to separate him from public sympathy, and oppress him with the sense of a self-imposed and willing degradation. We admit that he has committed an offence, but that he is not on that account to be deprived of sympathy and assistance.

Physicians, whose calling leads them among scenes of distress, and whose counsel and confidence are sought to relieve those who suffer, are accustomed to draw a veil between the scars and tears of families where they minister, and the gaze of the world. This being their sacred office, they look with detestation upon the common practice of making a display of the drunkard and his house-

hold for public entertainment, and are free to express their unqualified opposition to such a course.

Duty of Physicians. — We have now reached the inquiry as to the duty of physicians, and would first remark upon our relation to the inebriate in private practice. At present, the drinking man hesitates to consult his physician till the occurrence of mania or other acute symptoms makes it necessary. He realizes that he is disgraced, and hesitates to relate his symptoms to any one. His honor and manhood being compromised, he makes a determined effort to maintain his independence, and avoids conversation or counsel about himself. He thinks there is no sympathy for him, and, brooding over the compunctions and sorrows that are within him, abandons himself to his forlorn condition, and bears alone the burden that should be shared with his medical adviser.

This estrangement between physician and patient doubtless has its origin in the idea of criminality that is associated with the fact of intemperance; and it is only needful that it should be publicly recognized as a disease, in order to secure confidence and freedom on both sides. Until this is done, there can be no reasonable basis for professional counsel.

On the part of physicians themselves, there does not seem to be a full appreciation of their position and its requirements. Let us consider this a moment. It is said that we, as a profession, are doing much to promote intemperance by the administration of alcoholic remedies. Whether this be true or not, is a question which each one of us should gravely consider for himself. We have all the varieties of intoxicating beverages, and more than two hundred alcoholic remedies, at our command, for the treatment of all sorts of diseases requiring stimulants and narcotics, and it would be unreasonable, and even arrogant, to suppose that there is not occasionally misdirection in their choice and prescription. All this may be acknowledged, without admitting any more than the fallibility of human judgment and the uncertainty of human skill. While we have no sympathy with the wholesale clamor against the profession on this account, we believe there is need of caution in the administration of intoxicants to persons in whom the tendency to excess in their use is apparent.

The relation of our profession to this subject is peculiar, and, for this reason, important and responsible. No other class of men has a legal right to authorize persons to use intoxicants. Ministers of religion may teach the principles of temperance; lawyers may stand in the breach between the law and the offender; lecturers may be very eloquent over the evils of excess; but physicians only are authorized to *prescribe and direct the use* of these articles. So far as the consumer is concerned, he occupies a very different position when he takes them from the hand of his medical adviser, and when he goes of his own accord to a legalized

place of sale and purchases them. In the one case he relieves himself of responsibility, and in the other he assumes it. To him the moral aspect of the case is widely different.

What, then, is required of us? In considering this question, we are impressed, first, with the conviction that it is our duty to influence the public mind, so far as we may, in the direction of sympathy for the *entire* class of excessive drinkers. Intemperance is a public evil, and, as such, we must reach it primarily through public sentiment. That sentiment should lay aside its reproach and disgust, and adorn itself with charity. When this shall be done, society will have taken its first step towards the recovery of the inebriate, and its own security.

The method which is now popularly employed is to appeal to the conscience of the inebriate. His conscience admits the reasonableness and justice of the appeal. He knows, but does not perform. Like Paul, the apostle, he declares: "For to will is present with me, but how to perform that which is good I find not." A distinction is thus drawn between willing to do a thing, and the power to do it; and because this distinction is not incorporated with the morality which is popularly applied to this subject, the efforts to reform inebriates by such appeals are usually unsuccessful. Conscience, in such cases, is sensitive — so sensitive that it shrinks, like a hurt child, from contact even with what is good for it — but its power is gone. It is a slave to passion. It strives with the gross and hurtful, but yet it is overcome. As a philosopher has substantially said: If conscience were as powerful to do as it is sensitive to feel, and authoritative to direct, the world would soon find itself on the side of right.

In addition to this, a subscription to a pledge of total abstinence is demanded, and that it may prove effectual, the influences of association, and all the dramatic effect of secret and imposing rituals is added; but these reach only exceptional cases. The result of all this kind of effort, sustained by so much talent and piety, and continned so perseveringly over so many years, and sometimes incorporated with political action, has not, in the opinion of your committee, accomplished what its friends and supporters had reason to anticipate. We have no controversy with such efforts, nor do we discredit their sincerity and earnestness, but simply deplore their failure to accomplish the good which was intended.

As physicians, we have specific duties to perform. There is reason to fear that alcoholic liquors are employed too freely, especially among young persons; and that such practice is productive of evil consequences. We should see to it that we do nothing that may prove the occasion for excess on the part of those who commit themselves to our care, if it can be avoided. We are also called upon to instruct the families for whom we prescribe,

and the communities in which we live, concerning both the causes of intemperance, and the uses of alcohol. Popular ethics classes all beverages containing alcohol among the poisons, and popular ignorance raises its voice against their use on this account. Notwithstanding this, one truth still exists, viz.: that nature, science and experience can not be obliterated by the clamorous platitudes of men who, however good their intentions may be, are not the competent tribunal by whom this question of the use of alcohol is to be determined. Nature is the founder, science the expositor, and experience the judge, by whom we are to be guided in the decision of this question.

We have seen that the experience of mankind the world over testifies to, and defends the use of such excitants for the purpose of exhilaration and enjoyment. Let us now notice the never-to-be-forgotten fact, that they are also used for the purpose of supporting the system in the absence of ordinary food. That this is the case is one of the most astonishing results of human discovery. Anstie reports well-authenticated and extraordinary instances of the power of alcoholic liquors not only to sustain life in disease, but to supplement food in conditions of health; and it is probable that such instances have occurred in the experience of most of the members of this Society. He speaks of alcohol as an article of diet, and you may remember the case of the octogenarian soldier, who had subsisted for twenty years, in good health, on a bottle of gin, and a small crust of bread daily. It is a well-known fact, that the coca chewers of Peru are capable of sustaining a vast amount of labor for a very long time without food, if they can be allowed their accustomed quantity of coca. The power of tobacco, also, to compensate the want of ordinary food, is too well known, not only by consumers of the weed, but by all well-informed persons, to need demonstration. Soldiers, during our late war, frequently and cheerfully sacrificed a ration for the sake of a "quid."

Opium is remarkable for this compensating property. Eastern travelers have publicly declared, that their horsemen and guides would do more work under the stimulation of moderate quantities of opium, than by taking the habitual meal without it. The workmen in opium factories enjoy as good health as those who work in other factories. According to De Quincey, the operatives in the mills of Manchester use the drug, not to produce exhilaration, but to relieve what we have referred to in this report, as an uneasy, restless feeling, but what he calls a sense of fatigue and depression. It is for this purpose it is commonly used among the Orientals; but as its repetition is necessary to keep up the impression, the habit gradually fixes itself in the system.

Objection is made to the use of alcohol, because its effect is to stimulate temporarily, and it requires repetition. We submit that

this objection does not benefit the argument against the use of alcohol. The same may be said of the food we eat, and the air we breathe. We constantly need the punctually returning meal, and the ever present vital influence of atmospheric air. The suspension of either would be fatal.

It is assumed, also, that alcohol is not transformed in the system. The same may be said of water, without which we cannot survive. It is water all the time, and escapes in the same quantity that it is received into the body. In admitting this assumption (that alcohol is not transformed) for the sake of argument, your Committee do not adopt it as true, because the most reliable observers and experimenters upon the subject have demonstrated that alcohol may be appropriated by the system, and sustain life in the same way that food is appropriated, and enters into the nutrition of the body. Close observation in the alcoholic treatment of several diseases will frequently discover this fact. Large quantities may be taken by the patient, and there is neither exhalation of alcoholic odor from the lungs, or trace of it in any of the secretions.

We do not present these facts as arguments in favor of the habitual use of alcohol or any other inebriant, but simply as physiological truths which we cannot gainsay. It is bad logic and philosophy, and *worse* than bad physiology and therapeutics, to object to the use of alcohol on the ground that it is a poison, or that it is not assimilated.

In urging upon the non-medical advocates of reform to award to alcohol its true place and power, we are but fortifying them with truth, without which no cause will prosper. There are natural and prudential reasons why alcohol should be used with the utmost caution, and there is no need of straining truth, or perverting scientific facts in order to find arguments in favor of temperance.

Relation of the State.—The next point to which we invite attention is the relation of the State to this subject, and, in discussing it, we may simply advert to her position towards others who claim her care. It is taken for granted, by all classes, that the number of habitual inebriates in Pennsylvania, is much greater than all the insane, blind, deaf-mutes, etc., for whom the State makes liberal provision, and it is assumed by sociologists, and heralded throughout the land, that intemperance is one of the chief causes of these several maladies; yet, while we have institutions reared by public and private benefactions for all of them, neither the wisdom of our legislators, nor the philanthropy of our people has comprehended the necessity of offering shelter, and furnishing judicious care for a class of persons, of whom there are none more cultivated in intellect, more generous in heart, or more capable, under conditions of health, of adding to the culture and prosperity of the Commonwealth.

The question may be asked, What experience have we to justify the establishment of institutions for the care and treatment of persons who are addicted to alcoholic and opium excess? Our answer is that the experiment has been successfully tried in Massachusetts and New York, under the patronage of these States, and, for the last two years, at Media, Pennsylvania, by a private corporation. The results have been more satisfactory than with any other class of hospital practice, excepting only accidents and acute diseases. Your Committee believe it is not claimed by any of the distinguished gentlemen who have charge of hospitals for the insane in this country that even twenty per cent. of chronic cases recover; and chronic cases are generally understood to be those whose insanity has existed more than a year. Patients, however, who have been addicted to excess in the use of alcohol, opium, etc., from five to twenty years, have recovered in a larger proportion than is claimed for chronic insanity, though such persons, if they would continue free from danger, should totally abstain from intoxicants.

Another question is not unfrequently asked, to wit: Are the cures permanent? From ignorant or unprofessional minds this question may be excusable, but from physicians it is quite the reverse. It is a question the propriety of which we would not acknowledge, as related to any other known disease. We attend patients with fever, rheumatism, pneumonia, etc., and they recover; but no conscientious and intelligent practitioner will say "the cure is permanent," and advise his patient to go into the world again, pursue his business, and expose himself to all the influences which induced his attack, with the assurance that he will never have a recurrence of the disease. We send our patients to hospitals for the insane, and to general hospitals, according to their necessities; but the physicians in charge of such institutions do not send them back to us cured, and tell us "the cure is permanent." Such a statement would imply a re-creation of the patient without the tendencies and infirmities common to men.

The testimony of those whose experience in this matter entitles their opinion to consideration and influence, is that from thirty to fifty per cent. of patients in institutions for the intemperate, who were formerly a burden to their families, return again to society, capable of successful occupation in the affairs of life. That this percentage is large and satisfactory all will admit, and that it may be increased with advanced knowledge and improved appliances, there can be no reasonable doubt.

Are Inebriates Insane?—We have now reached a point, in this discussion, of great practical moment to those who are addicted to alcoholic and opium excess. Are such persons insane? To answer this question logically and fairly, we must distinguish.

The word insane, according to its etymology, means unsound, and in this indeterminate sense is often loosely used. If this broad definition be accepted, every man who exhibits disordered mental action, is insane. Under it is embraced not merely the drunkard, but all human beings. To use the word in this sense, therefore, would be manifestly unreasonable. Few persons would be willing to hazard the opinion that the celebrated Thomas De Quincey and Samuel Coleridge were insane, even through the years of intemperate indulgence during which their celebrity was chiefly gained. Men who are intemperate, either from opium or brandy, are not, in the majority of cases, men of insane intellect. Medical observation and diagnosis have, we think, distinctly proved that the diseased portion of the mind in such cases is chiefly of the will, not the intellect. They know, but are *impotent to perform*. An able medical writer, Dr. John Reid, in speaking of nervous disorders, says: "We often act upon the ill-founded idea that such complaints are altogether dependent upon the power of the will, a notion which, in paradoxical extravagance, scarcely yields to the doctrine that no one need die, if with sufficient energy he determined to live."

An intoxicated man may have hallucinations, be troublesome, and even violent, but such irregularities are analogous to symptoms of mental disturbance that are frequently witnessed in the course of acute disease — as the delirium in fever, and in the various forms of cerebral inflammation — and which passes off in a few hours or days, without the patient being considered insane.

Hallucinations and illusions may exist without insanity. They do not necessarily involve perversion of intellect or judgment. Indeed the reason may be quite clear, and competent to discover the existence and causes of those sensations, without being able to control them. Writers upon this subject speak of "insanity of the will," by which they mean a *perverted* will, that prompts to extraordinary acts which the insane person commits with full intent, and matured design, and enjoys satisfaction with the result, however distressing or dreadful it may be to others. Many inebriates *will* to abstain from excess in the use of intoxicants, and, indeed, determine to abstain totally, until the occasion presents which controls the will, but does not pervert it.

They act in opposition to it. They are captives, and the will yields to the insatiable demand of physical unrest and depression, or moral infirmity. When it is over, they are stung with the bitterest remorse, and sink into the deepest penitence and sorrow. Such, however, are not the fruits of insanity.

If these propositions are true, it is clear that institutions for insane persons are not the best means for the restoration of the

class we are considering, and we think we have the concurrent judgment of most, if not all, *experts* in the department of insanity, in support of this opinion.

The Opium Habit.—In conclusion, your Committee beg leave to refer briefly to a single fact concerning opium, without which this report would not cover the whole subject referred to the Committee.

The opinion that the opium habit is greatly on the increase in nearly all communities seems to be gaining strength, and especially does it seem to be increasing in those communities and states where the sale of intoxicating liquors is prohibited by law.

It is generally admitted that opium and alcohol are more largely used in medicine than any other drugs, and it cannot be denied that the effects of the abuse of these two wonderful products are most pernicious and destructive. They cannot be abandoned as remedies. They are too essential and too potent to be overlooked. They come to us laden with power for good, when properly used, and power for evil, when abused. Increased care on our part, increased intelligence concerning their true qualities and place, on the part of the people; and a sounder philosophy on the whole question of human necessities, by public teachers, will do much to correct the evils from which the community now suffers.

We have stated that from thirty to fifty per cent. of cases of habitual alcoholic intoxication are curable, and we now make the additional statement, that from our own observation, ninety per cent. of opium cases are curable, under institution treatment.

Your Committee regret that they have not been able to present a more complete and exhaustive report; but with very little literature and still less authority on the subject, we have been compelled to draw upon our own limited observation and experience for most of our propositions and conclusions; and we ask for them a candid review and criticism by the profession, whose responsible and dignified prerogative as teachers and reformers has been frankly set forth in the body of this report.

Joseph Parrish,
Edward Wallace,
Wm. B. Atkinson,
James King,
Jacob Price,
Committee.

Original Communications.

ARTICLE I. — *Remarkable Case of Somnambulism.* By J. A. A.

IT was my fortune during a series of years to have under direct observation, a case of somnambulism, in some respects more remarkable than any other upon record. The subject was a family relative and private medical student of my own. He attended his first course of medical lectures at the old Indiana Medical College at Laporte, in 1849, and subsequently graduated at the Medical Department of the Michigan University at Ann Arbor, in 1852. He entered upon the practice of medicine at Holland, Mich., soon after, where he continued until a little after the commencement of the war, when he became connected with the army as a contract surgeon, and was in active service until its close. For some little time after, he sought restoration of his shattered health by rest, but unfortunately, whilst yet feeble, he was prostrated by typhoid pneumonia, to which he succumbed in a few days. He was widely known, and very many persons are familiar with some of the facts about to be detailed.

The first time he was ever known to walk in his sleep, was in the spring of 1847, and the first attempt was an unfortunate one, as he fell into a stairway which was unprotected by balusters, injuring himself considerably, although fracturing no bones. He had risen and dressed himself, but when awakened by his fall was utterly ignorant of his whereabouts. I saw him a few minutes afterwards and found nothing unusual about him, but he remarked that he had not felt quite well when he went to bed. For some months subsequently he would now and then get up, dress himself and go about the house without any apparent object, and usually after a while return to his bed voluntarily, awaking in the morning with not the slightest recollection even of a dream.

My young friend was an enthusiast in music, and a very respectable amateur. About the summer of 1847, a somewhat dilapidated bass viol, which was a kind of heir-loom in the family, was brought into the house, and he devoted spare moments to learning how to play upon it. Unfortunately, the

antiquity of the instrument had told upon its keys, and unless they were wetted at each time of use, it would not remain in tune. He was determined, however, to command its notes, and succeeded. His somnambulic walks, thereafter, led him from his chamber to the parlor, and to the bass viol, and the family would be awakened in the small hours, by the inevitable tuning up prelude, mingled with slipping of the old keys, and quiet objurgations upon his part. Sometimes the bridge would fall down when the keys slipped, and sometimes a string would snap or escape from the keys, nevertheless he would persevere, repair damages, tune up, and then execute all varieties of music of which the machine was capable, not unfrequently accompanying it with his voice. All this would be done in total darkness. When any one entered the room with a light, he took not the least notice, although when spoken to he would reply in monosyllables or with considerable asperity. His face was usually flushed, although sometimes pale — the features immobile and passive, the eye open, pupil dilated, the surface glazed, and the lids apparently motionless. The extremities warm and the pulse full, frequent and soft. Very often the skin would be bathed with free perspiration. Remarkably sensitive to titillations when awake, there seemed total absence of reflex movements from this cause, whilst in the somnambulic state.

As he extended his acquaintance with music and musical instruments, his feats became wonderful. Whilst in attendance upon the Medical College at Laporte, the household looked forward with high anticipations to the hours when his skillful touch of the melodeon would wake them. He had a voice of the purest tone and very considerable compass, in fact, of rare sweetness. I am enabled to say from a multitude of observations, that he played with a precision and skill while asleep, that he could not approximate while awake. Beside this, he would execute music which he had heard, perhaps, but once, the evening previous or after a long interval — no note of which he could recall in his waking moments. His memory here seemed wonderfully exalted. If interrupted, he was irritable in the extreme, but would go on with his music exactly from the point of interruption.

Among the numberless exhibitions of his somnambulism, I have time only to notice a few of the most striking.

Whilst attending lectures at Ann Arbor, where I was then lecturing on Physiology, I requested his assistance in enlarging some of the drawings illustrative of minute anatomy and histology, for use in class demonstrations. He entered into the work with great zeal, and proved very expert and rapid in execution. One evening, previous to the day on which I was about to lecture on the kidney, I wished the cuts in Carpenter's Physiology, illustrating the tubular arrangement, etc., were ready. He had an engagement for the evening, but said he would try and prepare them in the morning. During the night he rose, dressed himself, played a few tunes on the guitar, part of the time singing (and, by the way, the guitar was about as dilapidated as the bass viol before noticed, and he had to knot one or two of the strings first), and then arranged the drawing paper, prepared his India ink and brushes, took the parallels and pencils and laid off the spaces, and worked for half an hour or more rapidly and perfectly, nearly completing the figures on pp. 596 and 597 of Carpenter's Principles, in the edition of 1853. His were taken from a previous edition not now in my possession. These drawings are now in the series used for illustration in Rush Medical College. Although we had a light in the room while watching him, he went on with his work entirely regardless of it. Before completing the work, he went to bed and slept until the usual hour in the morning, when at the breakfast he asked if he had been up in the night, as he had *dreamed* that he had. This was the only time he ever remembered even dreaming about being up or occupied in anything. He had by this time become so fully aware of his habits, that nothing of the sort astonished him. Shortly after this he went to spend the night with a fellow student, but a little after midnight he rose, dressed himself, and went out, followed by the other gentleman, walked down to the Exchange Hotel, where there were a number of his acquaintances and others waiting for a train of cars due at that time. Some one rallied him on his being out so late, but being cautioned by his companion, they did not attempt to awake him, but watched his movements. On being invited, he took a glass of ale, and then said he would only have time to go home and get his dinner before the afternoon lecture hour. He walked with his friend to our door, and was indignant to find it locked. His room mate (a cousin) admitted

him and awakened myself and wife. He asked if dinner was ready, and seemed astonished that it was not; then said he would get a drink of water and be off, "for old D. (one of the faculty) would be mad if he was late." I told him he had plenty of time and he need not be in a hurry. He then walked into the kitchen, drank a tumblerful of water, and looking up to the clock, although it was totally dark, remarked the time, and started for the front door. I then told him that I was not feeling well, was pretty blue, and wished he would sit down and play euchre with us. This seemed to please him, and he took off his overcoat and said he had as lief play until "old D." was through lecturing, as to go.

His cousin sat down at the table with us, and we played "three-handed (cut-throat) euchre." He paid not the slightest attention to us, although we passed the cards backwards and forwards between us, exchanging hands, and everything we could do to attract his attention. He dealt the cards in his turn, correctly, and played "according to Hoyle." In one hand, spades were trumps, and he held the jack of clubs. Clubs being led, he first threw down this jack, then quickly picked it up, saying, "I forgot that was the left bower." It is somewhat humiliating to record that, notwithstanding our tricks and devices, he beat us in the game.

On its conclusion, he got up hastily and insisted upon going to the college. We only prevented him this time, by throwing water in his face — the only method, by the way, in which we could awake him without great violence. Pungent odors, ammonia, camphor, etc., he seemed to disregard, or merely pushed away the object.

On regaining consciousness, he always appeared like one stunned, or suffering from a severe shock. The influence upon the pulse and nervous system was always so severe, that we never awaked him at these times if we could avoid it.

Whenever a little out of health, as from trifling attacks of indigestion, or after watching with the sick, or fatigue, he would be sure to be up and doing something notable in the somnambulic state.

One of the most remarkable of his exploits occurred several years after the incident just given. I think it was in 1860 or 1861.

He gave me the particulars himself, and I have had the necessary concurrent evidence from others. The circumstances were so extraordinary, that they almost caused him to determine never to practice medicine again.

In the rounds of his practice he had a patient, about whom he was very anxious. It was in the coldest winter weather, and the residence of the patient was about two miles distant. Visiting him early in the evening, he found him in a state so unsatisfactory, that he informed the family that if he did not find him better the next visit, he should change the medicine entirely. On rising the next morning, he went to the barn to put his horse to the cutter for an early start. He was a little puzzled at finding things somewhat misplaced, but supposed some person had been in the stable in search of a missing article. On visiting the patient, he was gratified to find a marked improvement. He inquired when the improvement commenced, and was answered, "Immediately after taking the powders which he had given in the night." The truth flashed upon him at once, but concealing his emotion, he inquired, with as careless an air as he could assume, "About what time was it when I was here?" They replied, "Between two and three o'clock." This proved to have been the case, as he was afterwards told by the family where he boarded. He had been giving the patient some fluid medicine, which he ordered discontinued, and then put up several powders, such as he had concluded upon the night previous, combining them as usual, and administering the first one himself.

The alarm of my poor friend, at the possible consequences of a similar act in the future, may well be conceived.

The considerable length to which this sketch has already extended, must prevent comment on the peculiar features of this case, which must, as before suggested, be considered one of the most remarkable of record. I could detail a large number of equally striking facts in his history, with experiments instituted as to the physical and psychological condition, did time and space permit.

It illustrated most forcibly the automatic action of certain of the mental faculties, irrespective of *mental* consciousness.

There is a physical consciousness which is something else than a mental consciousness. There is a physical volition which is something else than a mental volition.

All the so-called mental acts, may be carried on automatically, without mental consciousness.

The "unconscious cerebration" of Carpenter, is only an illustration of this automatic action.

In conclusion, it is not out of place to remark, that my friend was of a high order of intelligence, and never could be made a "subject," or a "medium," by the disciples of Mesmer.

ARTICLE II. — *Biliary Calculi.*

THE subjoined sketch of a case of biliary calculi may prove of practical value to some of the readers of the JOURNAL, who may hereafter be called upon to treat this painful and dangerous malady.

Mr. D., 415 S. Morgan street, about fifty years of age, had suffered, during many years, with recurrent attacks of violent pain "in his stomach," so severe in their character as on one or two occasions to prostrate him in the street. Within the past year, the attacks have been more frequent, but less severe. He came under my professional care about three months ago, at which time his condition was as follows: Figure spare and thin; countenance pale, but presenting none of the evidences of cachexia: skin in a healthy condition; respiration and circulation normal; appetite moderately good; had vomited very rarely a clear, watery fluid; bowels constipated habitually; fœces clay-colored, waxy and tough; urine normal in quantity, but high colored.

The pain, which had been occasional was now continuous, and was confined to the right hypochondrium, and accompanied with considerable tenderness; it was aggravated about an hour or two after each meal, from which time it gradually diminished.

Considering the case one of sub-acute gastro-duodenitis, involving partially the ductus communis choledocus, directed half a grain of proto-chloride of mercury every four hours, until five grains had been taken; to be followed by ten grains of sub-carbonate of Bismuth, before each meal. This was followed by such marked relief that the patient considered himself well, and I saw no more of him for two months.

About four weeks ago, the pain returned with redoubled violence. The same course of treatment was directed, but ineffectually. The iodide of silver, in solution, was followed by an aggravation of the symptoms so decided that the patient discontinued its use, after having taken two or three doses. By this time the pain had changed its locality to the left hypochondrium, and its character to a regularly intermittent paroxysmal type, simulating gastralgia very closely. Iron (Quevenne's) 3 grains, and strychnia $\frac{1}{40}$, together with ten grains sub-carbonate of bismuth, every 6 hours, was then administered for two days, without producing the slightest amelioration of the symptoms. A review of the case at this point left the diagnosis somewhat obscure. Believing the position assumed as the basis of treatment to have been clearly determined, the results of treatment indicated that it was at best but a secondary lesion. What was the primary one ?

Of this problem there were three possible solutions. Schirrous of the pylorus gastralgia, and biliary calculi. While the case presented symptoms common to each and all of these conditions, it likewise manifested others quite as contradictory. As an *experimentum crucis*, the patient was directed to take one pint of pure olive oil at a single dose. This was followed within a few hours by free purgation, and the discharge of *fourteen biliary calculi*, varying in dimensions from the size of a pea to that of a grape. The evacuations now resumed their normal color.

The removal of this *fons et origo mali*, left the patient entirely free from suffering, beyond what was occasioned by some slight tenderness in the right hypochondrium.

It is due to a highly esteemed professional friend to state, that the remedy was suggested in the course of an informal conversation, some months since, by Dr. Ira Hatch of this city. Having tested it experimentally, on two occasions, in his own practice, with as complete success, he is fairly entitled to the claim of originality, until the right of priority is clearly established by another.

W. H.

No. 188 S. Sangamon Street,
November 4, 1869.

Editor's Book Table.

[NOTE.—All works reviewed in the columns of THE CHICAGO MEDICAL JOURNAL may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of medical books can be had on application.]

Sleep, and its Derangements. By WILLIAM A. HAMMOND, M.D., Professor of Diseases of the Mind and Nervous System, etc., Bellevue Hospital Medical College. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 318. W. B. Keen & Cooke.

PROF. HAMMOND is one of our most industrious physiologists and most acute observers. In the book before us he has brought together a variety of facts, experimental and observed, which render it both valuable and interesting. However we may dissent from some of his conclusions, he manifests a zeal for discovery, and a candor and clearness in stating his opinions, which entitle whatever he writes to a respectful consideration. We have read the present treatise throughout with pleasure, and, at times, we might almost say, with fascination, and yet have laid it down with a vivid sense of disappointment. Perhaps no essay on the subject could fail in this result; nevertheless we are convinced that a proper recognition by the author of certain well established physiological principles, would have served to clear up portions of his subject which are now left obscure. The commanding professional position, and worthily won wide reputation, of Prof. Hammond, demand more than a passing notice of what he puts on professional record.

After calling attention to the necessity of sleep, or cessation of action for a temporary period, for each organ or apparatus of the system, the heart resting six hours of the twenty-four, the lungs eight, etc., and that this necessity probably extends even to organizations of the vegetable world — wherever use causes decay — he proceeds to discuss the causes of sleep, and adduces the varied opinions which have obtained, the most referring it to congestion of the cerebral vessels, or pressure from some cause on the cerebral mass, he observes that this idea has prevailed from

observing the *stupor* which notably results from these causes. But, according to Dr. H., stupor, coma and sleep are neither identical, nor even phases or grades of a similar condition. The only point of resemblance between coma and sleep consists in the fact that both are accompanied by a loss of volition. We quote:

1. In the first place, a stupor never occurs in the healthy individual, while sleep is a necessity of life.
2. It is easy to awaken a person from sleep, while it is often impossible to awaken him from stupor.
3. In sleep the mind may be active, in stupor it is, as it were, dead.
4. Pressure upon the brain, intense congestion of the vessels, the circulation of poisoned blood through its substance cause stupor, but do not induce sleep. For the production of the latter condition a diminished supply of blood to the brain, as will be shown hereafter, is necessary.

In investigating this last proposition, the author trephined dogs, and observed carefully, and even, by an ingenious appararatus described in the appendix, measured the collapse of the cerebral mass during sleep. Similar observations in cases of traumatic removal of the skull from the human being, congenital deficiency, the fontanelles of infants, etc., concurred to the same judgment.

"We thus see that the *immediate* cause of sleep is a diminution of the quantity of blood circulating in the vessels of the brain, and that the *exciting* cause of periodical and natural sleep is the necessity which exists that the loss of substance which the brain has undergone should be restored.

* * * "Whatever other cause is capable of lessening the quantity of blood in the brain is also capable of inducing sleep. There is no exception to this law, hence we are frequently able to produce this condition at will."

Thus heat, cold, voluntary diminution of attention, or fatigue, the process of digestion, excessive loss of blood, debility, and the action of certain medicines.

In the next chapter, describing the physical phenomena of sleep, it is stated that

"The ganglionic nervous system and the spinal cord continue in action during sleep, though generally with somewhat diminished power and sensibility. The reflex faculty of the latter organ is still maintained, and

thus varied movements are executed without the consciousness of the brain being awakened.

"Somnambulism is clearly a condition of exaltation in the functions of the spinal cord, without the controlling influence of the cerebrum being brought into action."

The fourth chapter considers the state of the mind during sleep, with the following conclusions:

1. Feeling — embracing sensation and emotion — is suspended, so far as the first is concerned; but is in full action as regards the second.

We do not see. hear, smell, taste or enjoy the sense of touch in sleep, although the brain may be aroused into activity, and we may awake through the excitations conveyed to it by the special senses. The emotions have full play, unrestrained by the will, and governed only by the imagination.

2. The will or volition is entirely suspended.

3. The thought or intellect is variously affected in its different powers. The imagination is active, and the memory may be exercised to a great extent; but the judgment, perception, conception, abstraction, and reason are weakened, and sometimes altogether lost.

The fifth chapter treats of the Physiology of Dreams. His opinion is summed up in the statement that

"Dreams are directly caused by an increased activity of the cerebral circulation over that which exists in profound sleep. This activity is probably sometimes local and at others general, and never equals that which prevails in the condition of wakefulness, when the functions of the brain are at their maximum energy."

In this chapter occurs the following paragraph, to which we wish to direct attention. We quote the sentences only to enter, also, our earnest dissent and protest. It is on a par with some of the teachings in poor old Paine's "Institutes," and is grossly unworthy the magnificent intellect of Prof. Hammond:

"Writers who contend for the doctrine of constant mental activity regard the brain as the organ or tool of the mind, a structure which the mind makes use of in order to manifest itself. Such a theory is certain to lead them into difficulties, and is contrary to all the teaching of physiology. The full discussion of this question would be out of place here; I will therefore only state that this work is written from the standpoint of regarding the mind as nothing more than the result of cerebral action. Just as a good liver secretes good bile, a good candle gives good light, and good coal a good fire, so does a good brain give a good mind. When the brain is quiescent there is no mind."

The sixth chapter treats of Morbid Dreams — prodromic, symptomatic and essential.

The seventh, of Somnambulism, in which he states (p. 218):

"Much observation and many experiments have convinced me that the importance of the spinal cord, as a centre of intellection and volition has been unwarrantably ignored.

"It is, of course, not a matter for doubt that the faculty of consciousness is latent in the spinal cord, so long as the brain is in a state of activity, and that the faculty of memory does not reside in it at all."

Sometimes in the progress of diseases the cord obtains the mastery of the superior organ, and dominates with terrible power. All sense exercised during somnambulism owes its activity to the spinal cord, and in most cases the brain is so profoundly asleep that no impressions whatever are transmitted to the cord, and therefore there are no sensations whatever except that of touch.

In artificial somnambulism — the hypnotism of Braid — this power of the cord is even more higly manifested, and the brain is still even more incapable of control.

The concluding chapters are devoted to the Pathology and Treatment of Wakefulness, Somnolence and "Sleep Drunkenness."

The limits of the present notice will not permit further extracts or even brief abstracts, as we should desire.

Without entering into any general discussion here, we beg leave to append these suggestions:

1. The greater or less amount of blood contained in the cerebral vessels, *per se* explains nothing. There is, when the bones are fully developed and united, a uniform pressure; when there is less blood in the vessels the cranial cavities and cerebral interspaces contain an increased amount of serum. When there is an increased amount of blood there is diminution of the cranio-spinal serum. Cessation of nutrition of the brain mass reveals, *post mortem*, "water on the brain." Hence abundant misconception of necroscopic observations. The amount of blood flowing *through* a part is determined by the amount of tissue metamorphosis, cell or molecular, taking place in that part, whether brain, muscle or gland. Diminished organic change in the tissue of the cerebral mass may lessen the amount of blood *in* it; but it does not

follow that every diminution of the mass of blood will lessen the amount of organic change. More of the blood is used. This is the case often in exhausting hæmorrhages. Rapid organic change is still going on, involving extreme vigilance, and still further impoverishing the blood. Hyperæmia and congestion are not synonymous terms. The first may consist essentially in velocity of transit and not in massing up of the blood. In passive congestion there is slower transit or actual impaction of blood in the vessels. It is not the *pressure* here which lessens the activity of the vital manifestation — brain or other — it is the cessation, or at least diminution of organic change, a circumstance wholly irrelevant to pressure, except in so far as pressure may be a cause of the diminished organic change.

It seems to us nearly time to get our medical language freed from these hydraulic phrases, which have ceased to have any appropriateness or significance.

In sleep there is a diminution, *pro tanto*, or cessation of nutritive changes in the true nervous substance, although the phenomena suggest that the process of removal of effete matters is still going on.

It would appear, indeed, that this latter is an essential circumstance for the occurrence of sleep, for nothing more conduces to wakefulness than imperfect elimination. No agents are better adapted to secure sleep than those which energize this process. This is probably the *rationale* of the use of Bromide of Potassium in wakefulness — a remedy which Dr. H. especially lauds.

Those agents which, like opium and alcohol, in large doses directly check organic changes, are notably followed by unpleasant secondary effects unless activity of elimination is in some manner secured. Indirect narcotics are always therapeutically the best, unless perchance in acute inflammation or other causes of excessive tissue change.

In the stupor or coma from drugs, mechanical pressure, cold, etc., etc., there is simply a more or less complete cessation, both of organic nutrition and elimination; it is not merely a hydraulic process.

2. What *we* call the mind is an assemblage of faculties known to us by its manifestation through certain organized parts. It is not, in our view, a "secretion" any more than light is a secretion

of the retina, or sound of the auditory nerve. Its force or forces we can as well conceive determining cell or molecular changes upon the vesicular expansions of neurine of the cerebral masses, as we can of light rearranging the retinal surface. When the eyelid is closed, we are unwilling to say there is no light, and when sleep stops the changes which in waking moments continually take place in vesicular neurine, we are equally unwilling to say, with Prof. Hammond (p. 111), "*there is no mind.*" We do not dissent from his statement from any mere dread of materialism, but simply because in our view the doctrine is unphilosophical in the extreme, without even the redeeming quality that in some way it tends to simplify and explain.

3. After the first impression of the causes of common, special or mental sensation upon the structure adapted to receive it, all subsequent manifestations are strictly automatic. The mind acts upon and through the nervous system by as truly automatic a mechanism as does the physical stimulus through parts connected through the spinal cord.

Failure to appreciate the phenomena of somnambulism, of whatever character (hypnotism, etc.), arises from want of understanding of this automatic action of the mental faculties, with or without consciousness. Just as some people conceive the excito-secretory process to be something essentially distinct from the excito-motory, so very many seem to apprehend that the mental stimulus acts somehow differently from other stimuli in determining the so-called *reflex* phenomena of life.

Professor Hammond recognizes the "unconscious cerebration" of Carpenter, and yet not coupling this with the true mechanism of automatic mental manifestations, is driven to conceive of a previously ignored centre of intellection, volition and consciousness in the spinal cord (p. 218)!

But we have already vastly surpassed the space we can allot to this book. Let our readers buy and read it, for it is well worth attentive study.

A Handy-Book of Ophthalmic Surgery; for the Use of Practitioners. By JOHN Z. LAURENCE, F.R.C.S., Assisted by ROBERT C. MOONE. Second Edition. Revised and Enlarged by J. Z. LAURENCE. Philadelphia: H. C. Lea. 1869. Pp. 227. W. B. Keen & Cooke.

AMONG the numerous works on this specialty the work of Laurence must take a high rank. It is concise, yet clear and practical. For the busy practitioner, who wishes to consult a high authority and yet not wade through the sea of technicalities which the majority of ophthalmologic treatises half drown us in, this manual is especially to be commended.

It is freely illustrated, and elucidates in a highly practical manner the methods of examination, pathology and curative management of all the leading affections of the eye which are likely to be met with in general practice.

The Pathology and Treatment of Stricture of the Urethra and Urinary Fistulæ. By Sir HENRY THOMPSON, F.R.C.S., etc. From Third and Revised London Edition. Philadelphia: H. C. Lea. 1869. Pp. 359. W. B. Keen & Cooke.

CONTRARY to the usual practice of authors, especially when a book has proved its popularity by passing to a third edition, this author has cut down the bulk of his treatise upwards of eighty pages. Points once in controversy having been settled, need no prolongation of the discussion, and the matured convictions of a well-known competent observer do not demand a tedious catalogue of detailed illustrative cases. The Anatomy and Physiology of the Urethra, with the Pathology of the different varieties of Stricture, their causes, etc., are first given, and then succinct accounts of the most approved medicinal and surgical modes of treatment. It is, perhaps, the best monograph on the subject.

Pamphlets.

Surgery of the Cervix in connection with the Treatment of certain Uterine Diseases. By Thomas Addis Emmet, M.D., etc., New York City.

In this monograph Dr. Emmet discusses several topics of interest. He justly thinks too much importance has been attached to a detected erosion or so-called ulceration of the neck, when the condition of the cervix is generally but an effect and not a cause.

In the condition known as endometritis, with flexure, he uses large vaginal injections of water at from 98° to 104°. General therapeutic measures, of course.

For local treatment he prefers a solution of chromic acid, Churchill's strong tinct. of iodine, the persulphate of iron, and various other astringents, p. r. n.

These he applies by means of his uterine probe or applicator, by which he can get the exact sweep of the canal, saving thereby much pain to his patient. A little cotton is wound around the applicator after the proper curve has been given it, this saturated with the medicament and carried to the fundus. The recumbent position is insisted upon until the effects of the application have passed off. Sponge tents may be required. Twice a month is as often as these applications should be made.

If, after a reasonable period, the flexure remains unchanged, division of the cervix may be justifiable. The important point here is to ascertain whether the flexure is above or below the vaginal junction. Above the junction, division should be considered exceptional to the rule — below this point, it is not infrequently of great service — both for the relief of dysmenorrhœa and sterility. Except in cases of constriction of the os following the use of nitrate of silver, or from other causes, or fibrous tumors, he now never incises the cervix laterally. A division should never be attempted when the existence of perimetritis is suspected.

After detailing the steps of the operation, he calls attention to the fact that alarming hæmorrhage may supervene some considerable time after the operation, from vessels which, when first

divided, contracted so that there was very trifling bleeding. Careful plugging is necessary, and the cervical pledget should be allowed to come away by suppuration.

"Retroflexion can be cured by the long continued use of hot water injections and hot baths, blistering the neck occasionally to deplete by the watery discharge, daily glycerine dressing, and by a careful attention to the state of the bowels and general condition. The malposition may be gradually removed by frequent manipulations: the finger of one hand in the rectum lifting the fundus, and a finger of the other hand in the vagina depressing the cervix. Modifications of this plan by the use of atmospheric pressure, are sometimes useful.

Dr. E. faithfully exposes the disastrous results of improper incisions, and explains cases in which amputation of the cervix may be best.

Attention is directed to the fact that a certain amount of prolapsus may be present, so that without due caution (as has occasionally happened) the peritoneal cavity may be opened at a point apparently distant from the vaginal junction.

Many females, he states, have been assured of cure of the erosion, and yet left in a miserable condition. The neck is found smooth and hard, and, in fact, a mass of cicatricial tissue. Oftentimes the situation is analagous to the "irritable stump." These cases sometimes resist all local treatment, and require excision. It is, however, unnecessary to remove more than a thin section from the entire surface to a limit at which the surrounding tissue can be found free enough to be drawn over the stump, after the plan of Dr. Sims.

The successful result of local treatment is in inverse proportion to the remaining induration, for it is impossible for the uterus to properly perform its function if the cervix is left a mass of cicatricial tissue. As a surgeon, Dr. E. remarks, he has always been conservative, but he has been forced to have recourse to surgical measures, and acknowledges that his ingenuity has been oftener taxed to repair damages inflicted by means used to afford relief, than from the result of disease uncomplicated.

We sincerely hope that those who "think they have mastered the art as a specialty when once in possession of a porte-caustique and a speculum," will ponder these timely words of Dr. Emmet.

Inter-Dental Splint for the Treatment of Fractures of the Inferior Maxilla. By E. A. Clark, M.D., Resident Physician St. Louis City Hospital.

Dr. Clark has been devoting large attention to the improvement of surgical apparatus and dressings for several years past, and has introduced several valuable improvements. In fracture of the inferior maxilla he contrives two vulcanized gutta-percha splints, conforming accurately to the shape of the teeth in both jaws, or to the alveoli when the teeth are wanting. The upper and lower splints are associated by means of pivots and triangular springs, so that their force will press the inferior maxilla downwards, the splint itself preventing lateral motion. The rubber splints are modeled to the case in the same manner that the dentist prepares his artificial alveolus.

Although not mentioned by Dr. Clark, a similar mechanism is useful in cases of exsection of the lower maxillary. Many years since, the late Dr. Brainard devised such a splint, which was manufactured for him by the well-known dentist, Dr. W. W. Allport, of this city. The appliance in that case proved eminently satisfactory, although several other forms of dressing failed to retain the parts in position.

The great facility with which the vulcanized rubber may be prepared in any shape desired, suggest it as eminently deserving of more general use than has heretofore been made of it.

Our Navy. Its Offence is Rank. Rank in the Navy. Petition. Circular. From D. B., Surgeon U. S. N.

We had supposed, until quite recently, that a gradual amelioration had taken place in the usages in the naval medical service, which, many years ago, called forth the united remonstrances of the profession. It appears, indeed, that some steps in advance were taken by the government. We quote from one of the papers referred to above:

"The Honorable Gideon Welles, who, from his experience as Secretary of the Navy during the entire war, had good reason to know the value of the other branches of the Navy, established by Regulation, as had ever been the custom in the Navy, certain advancements in their (the staff's) rank, in the lower grades only, partially commensurate with that of the line officers, — not advancing them, however, in the higher grades. This

was done after full consultation, and the unanimous concurrence of the Attorney-General, the entire Cabinet, including President Lincoln, and it is said, also, the whole Supreme Bench. The rank so conferred stood for years as a matter of history and fact. Officers were appointed and confirmed by the Senate, and commissioned as surgeons, paymasters, and engineers, with the rank of lieutenant-commander — a new grade in the navy — under the 'Regulations of the Navy,' which were patent to the world, and were recognized by Congress during several years as valid and in full force."

Nevertheless, on the accession (temporarily) of Mr. Secretary Borie, he decided, on the strength of the opinion of Attorney-General Hoar, that this entire action was illegal, thus remanding the promoted officers, without trial or charges, to the lower rank — *in statu quo ante bellum* — the war wherein they had distinguished themselves, as a class, certainly not less than the officers of the line.

"It so happens that the last Act of Congress on this subject was the indorsement of the General Order of Secretary Bancroft, of August 31, 1846, by Congress, on the 5th of August, 1854, which, according to the ruling of the present Secretary, appears to have been in force illegally for eight years. The effect of this old order, put into action at the present day by Secretary Borie, in his own Order, No. 120, is to stop the promotion of all staff officers at the grade of *commander*, and to reduce many surgeons and paymasters who are over forty years of age, and have been in the navy twenty-five years, to the grade of *lieutenant*. In 1846, that grade was equal to the present one of commander, and the order was a liberal one. Now, owing to the rapid promotion and increase of numbers in the line, a lieutenant in the navy, instead of being forty years of age, is a young man of twenty, who entered the navy during the war.

"To the lasting disgrace of the United States navy, let it be said, that it is the only service now existing where this aristocracy of the line is fostered and encouraged; all other navies have rid themselves of it years ago. In the French and Austrian navies, the staff officers are represented from the grade of rear admiral down to that of lieutenant; in the English and Spanish navies, from vice-admiral; while in the naval service of autocratic Russia, where there exists a superior title to admiral, that of general admiral, the senior medical officer is eligible to that rank, and the assistant surgeon rates as lieutenant, and not master, as with us, nor yet as ensign, as proposed by Mr. Grimes.

"The staff officers of the navy demand that they shall not be thus wantonly degraded; and at the next session of Congress will urge that honorable body to be put more nearly on a par, not only with the line branch of our own navy, but the naval organizations of the whole civilized world."

This demand does not seem to us unreasonable. In every particular of education, native ability and gentlemanly deportment, so far as our acquaintance and information extend, the medical staff "rank" the highest position they have ever been awarded or now claim. We trust not only that this claim may be granted, but such a degree of independence may be guaranteed, that hereafter, at least, no officer of the line may compel a wounded or sick man to go upon duty when the surgeon officially certifies to his inability. If the surgeon abuses his trust let him be tried for the offence, and a suitable penalty inflicted.

This, also, would seem a common-sense proposition; nevertheless, it is but a few weeks since a highly competent and conscientious surgeon was suspended, for two years, if we rightly remember, for refusing to send a disabled man upon duty, at the command of some jack-a-dandy officer of the line.

We know it is very easy to say to the naval surgeons, If you don't like your positions, resign them; but aside from personal considerations, of which we have not space here to speak, but which readily suggest themselves, it should be a matter of professional pride, as it most assuredly is of national and patriotic concern, that the navy should be able to secure and retain medical ability and experience of the highest grade.

Steiger's Literarischer Monatsbericht. A Catalogue of Books in the German Language, Imported, Published and for Sale by E. Steiger, Publisher and Bookseller, 22 and 24 Frankfort Street, New York. For September and October, 1869.

For those of our readers who wish to procure German and other foreign books and periodicals, we refer to this house as prompt and reliable.

Lindsay & Blakiston's Publications. Philadelphia, September, 1869. Catalogue, with prices.

The History of four Cases of Chronic Inversion of the Uterus, with the Account of an Operation Designed as a Substitute for Amputation. By T. Gaillard Thomas, M.D., Professor of Obstetrics, etc. New York.

An exceedingly important paper. A succinct account of the history, diagnosis, etc., of this serious difficulty is given, with

detailed report of four cases; one by Thomas Addis Emmet, M.D., the second by J. Worster, M.D. (New York), the third and fourth by Dr. T. himself. In the last case, he performed the unique operation proposed as a substitute for amputation.

Conceiving the main obstacle to reduction to be a strictured condition of the involuted cervix or even permanent adhesions formed, he first attempted to relieve this by incision, fixing the point of constriction by the finger, then drawing the womb down and cutting through the tissue of the neck, as recommended by Aran. By this act an artery of considerable size was cut, and the hæmorrhage checked with extreme difficulty. Further efforts at taxis were abandoned.

A week afterward, Dr. T. made an incision in the abdominal wall, some two inches in length, as in the exploratory incision of ovariotomy, and having ascertained, by the finger inserted in the uterine sac, that there were no adhesions, he passed in a steel dilator, made on the principle of a glove stretcher, dilated the stricture, and afterwards readily restored the uterus to its place.

Speedy recovery ensued.

Several modifications in the operation are proposed for future cases, which space will not permit us to detail.

The operation was both bold and successful, and what is better, philosophical and promising.

Editorial.

Improvement.

We think our readers will unite with us in the opinion that Messrs. Keen & Cooke, our new publishers, are doing excellently well their part of the work. And all concerned, editors, publishers and printers promise that the future shall show a constant advance.

In the last number were a few vexatious typographical errors, overlooked in hastily reading of proof, but hereafter biblical accuracy will be attempted. Readers will oblige us by correcting with the pen several obvious errors in some of the formulas for prescriptions given in that number under the general head, Loot.

These principally consist in confusion of the ℥ and ℨ denominations. In the September issue, the article on Chinese medicine should have been placed under a different general heading, and credited to the *California Medical Gazette.*

Please aid us with your communications.

Specialties.

Much comment is arising with regard to the more stringent enforcement of the rule against advertising of specialties, adopted by the American Medical Association. The letter of the law not infrequently seems repugnant to justice. It is a matter of notoriety that many of the most eminent members of the profession do restrict themselves to the practice of some particular specialty. They proclaim it in the colleges to which they happen to be attached, in the medical periodicals for which they write, the books they compile or edit, and, more loudly still, through partial friends in society.

It passes the comprehension of the present writer, why the briefer and more compendious mode of attaching the name of the specialty practiced to an ordinary business card or advertisement in the medical, or even secular press, should so horrify the brethren. A business card or advertisement, and a fulsome laudation of one's own skill and parade of certificates are very different affairs.

It would seem that the whole thing resolves itself to a mere question of taste, about which gentlemen may differ. To our mind, the specialist assumes the virtue of modesty, although he may have it not, when he writes, or prints his chosen function after his name, rather than, by the use of the major term only, giving space for the belief that he is ready for business in any department.

To the writer it appears that the real point is: Does the avowed specialist *know* any more about it than "any other man"?

Ozone.

Have the physicians of this section noticed the remarkable abundance of ozone in the atmosphere during the past six weeks? The unusual prevalence of catarrhal disorders directed our own attention to the subject, and almost daily observations have shown

a remarkable amount of this element present. The test employed was the simple one of Polli's. These autumn days have thus been proved, as Schönbein felicitously termed them, *blue* days. Our own experience has further shown that there has been from, perhaps, the same cause, an unusual prevalence of catarrhal diarrhœas, as well as affections of the respiratory mucus membranes.

ARREARAGES—PLEASE NOTICE.

All persons indebted to the Journal for subscriptions for the present and previous years, or for advertisements in the same, are respectfully requested to remit the amount due to the undersigned or to his order only. I have advanced largely in sustaining it, at great personal inconvenience, and now that the future of the Journal is secured beyond contingency, I trust that these dues, *personally my own*, may be liquidated at the earliest possible opportunity.

J. ADAMS ALLEN,

November 9, 1869. 503 *Michigan Avenue, Chicago.*

Loot.

On Certain Influences of Schools Injurious to Health.

By Prof Rud. Virchow.* *Virchow's Archiv.*, *XLVI*, p. 447, May, 1869.

The injurious influences of schools upon the health of the pupils have frequently, especially since the end of the past century, attracted the attention of physicians and teachers, now on this, now on that point, yet usually without being investigated more exactly, in a truly scientific manner. . . . . Only very few attempts were made, by means of systematic researches, to gain a basis of real facts for forming opinions, and it must be acknowledged a very great advance that a beginning has been made at present in certain directions to procure statistics of what may be called the school diseases. Only extensive, scientifically certain, *comparative* statistics, will enable us to judge, with full confidence, what affections or diseases are produced by the schools,

* This report owes its origin to an investigation by request of the Prussian Government. We consider it of considerable value, presenting a clear and convenient view of this important hygienic question, and therefore give an English version of as much of it as our space will allow. — Ed.

and what means should be adopted to prevent them. Where this basis is wanting, there are still certain general scientific rules, which are applicable to schools as well as to other institutions of society, but it can not be denied that, in applying them, important conditions may very easily be overlooked or wrongly estimated.

The following report will endeavor to keep the two groups as distinct as possible, and carefully separate those affections well established in fact from those merely guessed at. In first line, as regards reliability of actual demonstration, we have:

1. *Affections of the Eye, especially Near-sightedness.* The first (though still inaccurate, and in no wise methodical) endeavors to establish, by statistics, the supposed influence of schools upon the development of near-sightedness, were made in the beginning of this century, by the Englishman Ware. Since then, similar researches have been made in different parts of the continent, particularly in Germany, partly official, partly by private persons, but almost never logically and systematically. Only the investigations of Dr. Hermann Cohn,* of Breslau, both as regards the number of persons examined, and as regards the method and accuracy of observation, have assumed a shape corresponding to the demands of modern science, and may be considered as exceedingly valuable, nay, in a certain sense, as decisive. . . . .

The total result was found to be that, among the 10,060 scholars, vision was not normal in 17.1 per cent., but that the latter figure was very unequally distributed, namely:

In the village schools,	5.2	per cent.
" city primary schools,	14.7	"
" middle schools,	19.2	"
" girls' high schools,	21.9	"
" "Real" schools,	24.1	"
" gymnasia [high schools],	31.7	"

Among the 410 students examined there were found even 68 p. c. with abnormal vision (ametropia).

Now, leaving out of present consideration hyperopia, astigmatism, and the actual *diseases* of the eyes, as of secondary importance, and considering only near-sightedness proper (myopia), still we meet with the distressing result, that in all nearly 10 p. c. of the children are near-sighted, viz.:

In village schools,	1.4 p. c.	
" city primary schools,	6.7 "	city schools 11.4 p. c.
" girls' schools,	7.7 "	
" middle schools,	10.3 "	
" "Real" schools,	19.7 "	
" gymnasia,	26.2 "	
And among students,	60.0 "	

* Some account of these investigations was presented to the readers of this [St. Louis] journal in the January number of this year, p. 73.

The regular increase here presented in the aggregate is repeated in a remarkable manner in taking separate account of each school according to classes:

	VI.*	V.	IV.	III.	II.	I.
Primary schools, - -	—	—	2.9	4.1	9 8	9.8
Gymnasia, - - -	12.5	18.2	23.7	31.0	41 3	55.8

The unfavorable opinion of Dr. Cohn is, therefore, unfortunately, incontrovertible, the less so since he shows, by extensive tabular evidence, that not alone does the number of the near-sighted increase from class to class, but the degree of myopia likewise rises. . . . . The myopia in these schools, therefore, is on the whole *progressive;* it pursues that dangerous path which gradually leads to actual asthenopia.

Dr. Cohn justly disavows the opinion that the enormous frequency of myopia among school children should be ascribed solely and exclusively to the school. Outside of the school, even under the parental roof, many unfavorable conditions are evidently operating. . . . . Nevertheless, it may be affirmed, with full assurance, that persons of the age of scholars in the first class of gymnasia do not average 55 to 56 p. c. of near-sighted, nor are there 60 p. c. among persons of the age of students. And though we may concede that insufficient illumination, fine print and fine handwriting, the habit of bending forward, etc., operate injuriously in domestic occupations, also, it must yet be acknowledged that some of these disadvantages at home arise from habits of the school, or at least that the school does not sufficiently oppose the acquiring of these habits, but rather directly favors some of them.

Beside the question of illumination and light of the school-room, Dr. Cohn has principally examined that of the furniture, *i. e.*, desk and seat, and believes himself justified in condemning the present arrangement as positively injurious. This arrangement, he says, compels the pupils to look at print in close proximity, and with their heads bent forward. This requires, on the one hand, a greater activity of the muscles of accommodation in the eye, causing in its part an increase of hydrostatic pressure in the posterior part of the eye-ball and elongation of its axis; and, on the other hand, the bending forward of the head causes obstruction to the flow of blood from the eye, congestion of the eye, and hence, also, increased pressure in the fundus of the eye. Both circumstances together are the cause of the near-sightedness. . . . .

2. *Determination of Blood to the Head.* In the previous section the fact has already been spoken of, that the inclined position of the head causes congestion. . . . . Other conditions

* VI, or IV, respectively, being the lowest, I the highest class. — Ed.

operate in the same direction. In bending the head forward, the trunk naturally is also inclined forward, and the more so, the lower the desk. From this results a certain compression of the abdomen, with consequent impaired activity of the diaphragm, the most powerful muscle of respiration. But incomplete inspiration opposes the return of blood from the veins of the neck into the chest.

Added to this is the circumstance that during close attention respiration is incompletely performed, the more so, the less the demand for respiration is directly excited by one's own speaking. . . . .

All these circumstances favor what is called *passive* or mechanical congestion, by impeding the return of venous blood. But there is, in school, a very efficient cause also for so-called *active* congestions to the head, *i. e.*, increased flow of arterial blood, and that is the active labor of the brain. . . . .

Among the various affections arising from these partly passive, partly active, congestions, the following three have of late given occasion for statistical researches:

(*a.*) *Headache.* Guillaume (*Hygiène scolaire. Genève*, 1864), who designates it plainly as "*céphalalgie scolaire*," found, among 731 pupils of the Collége municipal in Neufchatel, 296 suffering frequently from headache, — over 40 p. c. Girls were more often afflicted with it than boys, 51 p c. of the former, to 28 p. c. of the latter. . . . . Becker (*Luft und Bewegung zur Gesundheitspflege in den Schulen*, Frankfurt a. M., 1867) examined 3,564 pupils; . . . 974 of them, or 27.3 p. c. suffered more or less from headache. . . . . In the first class of the gymnasium 80.8 p. c. complained of it. Becker concludes from his figures — what is not quite accurate — that the number is smallest in the first school years, and increases with longer attendance, greater number of hours of attendance, and the amount of mental exertion required. As an auxiliary cause he mentions too small rooms.

It is necessary to mention another circumstance for consideration. Deville and Troost found that certain gases, especially carbonic oxide, are capable of passing through red-hot iron, a circumstance not rarely confirmed in school-rooms heated by iron stoves. Headache, dizziness, trembling and similar accidents are the consequences of a slight operation of this so poisonous gas. Dr. Oidtman does not hesitate to assume chronic poisoning by carbonic oxide as comparatively frequent in his part of the country, which is rich in iron stoves.

(*b.*) *Hæmorrhage from the Nose.* Guillaume found it frequent in 21 p. c.; more frequent in boys (22 p. c.) than in girls (20 p. c.) . . . Becker found only 11.3 p. c. subject to epistaxis; accurate details are not given, but he states that the hæmorrhages

are most frequent in the higher classes of the gymnasium, in the girls' high school, and one private school, — in those schools, as he says, the pupils of which sit longest in school, and move about least in the open air.

(*c.*) *Goitre.* [Guillaume calls it *goître scolaire*, the scholars call it "*gros cou.*" He found it in 56 p. c.! — 58 p. c. among boys, 64 p. c. in girls. It frequently disappears during vacations, and becomes permanent only at a later date, but is sometimes found in girls of eight years after one year's attendance. Thus far, the data of Guillaume stand alone, and it is doubtful if they are entitled to general acceptance, though it is true that the female sex and youth predispose to goitre, and that dilatation of the cervical vessels engender a disposition to this affection.]

Headache and bleeding from the nose, however, are affections sufficiently well known to physicians, and many parents, as not rarely accompanying attendance at school. The observations before us do not indeed suffice for drawing absolutely certain conclusions, . . . nevertheless, we can but acknowledge, even now, that the school favors, and perhaps often causes, these conditions, and that their frequent occurrence should be a subject of serious consideration.

At this point, the question naturally suggests itself as to the influence of congestive states, such as have been spoken of above, in relation to the mental faculties of the pupils. In fact, it can not be doubted that such conditions are often combined with confusion, incapacity for thought and mental labor, and that, when they become habitual, they may engender dangerous predispositions of the brain. . . . .

3. *Curvatures of the Spine.* Not a few among the physicians who have paid special attention to the school question, and a great number of orthopædists, maintain the opinion that the school bears a large share of the blame in the production of deviations of the spinal column. Especially the lateral curvature, so-called scoliosis, and chiefly the form known as "habitual scoliosis," is here accused. Fahrner says: "Since almost 90 p. c. of these curvatures originate during school years, and the curvature corresponds exactly to the posture in writing, we certainly are justified in accusing the school as the main cause." Guillaume illustrates the comparison of the common form of scoliosis to the writing posture by a drawing, undoubtedly correct in itself, and adds that he found, among 731 pupils, 218 (*i. e.*, almost 30 p. c.) showing a deviation of the spine.

The experiences of orthopædists unanimously agree in that the majority of scolioses originates during the period of obligatory attendance at school. . . . . It can be asserted with safety, that the common scoliosis is a developmental disease of the age of obligatory attendance. It is less certain if the school, as such, be

the chief cause of this disease. On the one hand, comparisons are wanting with such countries and ages where school attendance is not obligatory. The testimony of the Primary School Committee of New York, which Guillaume adduces, has a certain value, but it is not decisive. On the other hand, comparison of many schools would be necessary on this point. . . . . A special consideration against the implication of the school is the great preponderance of scoliosis in the female sex. [Guillaume counts 18 p. c. among boys, and 41 p. c. among girls. This, of course, includes many slight cases. The experience of orthopædists, chiefly on severer cases, is more striking. Klopsch reckons 84–89 p. c. of all scoliotic persons to be in females, etc.] With these figures before us it can not be doubtful that the school is not the only cause of scoliosis; nay, it must be conceded that it is not even the chief cause. . . . .

From consideration of the evils spoken of, even though they are only in part to be ascribed to the school, very definite obligations of the latter may be deduced. On the one hand, the pupils, especially the female pupils, must be appropriately seated and carefully watched in regard to posture and carriage. On the other hand, they must be offered well-timed opportunity by gymnastics to give proper exercise to their limbs.

4. *Affections of the Organs of the Chest.* . . . . Selecting [from the accurate mortuary tables of Berlin] the ages of obligatory school attendance, we meet with a rapid rise of the mortality from pulmonary and laryngeal phthisis in the ages of from 10 to 15 years, which began in the preceding period of from 5 to 10 years of age, and is considerably augmented still in the later period of from 15 to 20.

		Pulm. Phthisis.	Consumption.
There occur, at the age of	5—10 years,	4.81	8.93
" "	10—15 "	12.96	7.90
" "	15—20 "	31.88	4.74 per cent.

of the deaths, from all causes, without considering scrofula and many other nearly related categories. This result is certainly very remarkable, especially when we consider that, in persons of these ages, only typhoid fever and cholera afford mortality figures at all approaching the above.

This mortality, it is true, can not be ascribed to attendance at school alone; . . . nevertheless, the fact must not be underrated. Circumstances of moment indicate that the school contributes much towards it. The following influences, more especially, may be counted as injurious: (1) the vicious air, rendered so by the presence of many children; (2) frequent "colds," caused by the change from the hot school-room to the free and cool air outside, by draughts from windows and doors, etc., whereby inflammations of the throat and chest are produced in great number;

(3) the dust of the school-rooms; (4) the fact that the respiratory movements are impaired by the long-continued sitting.

[The author here mentions that from recent investigations we are no longer able to identify phthisis with tuberculosis, but that the former is due to a variety of processes, all of which finally produce ulcerations of the lungs.] The majority of these begin with simple catarrhal and inflammatory processes, which owe their origin to external agents, especially cold and the inhalation of irritating substances (dust, carbon, etc.) Their continuation is favored by low, respiratory movements, which effect accumulations and retention of excretory matters; furthermore, by the viscidity and perishable nature of these excretory substances, which are decomposed and inspissated, and on the character of which the nature of the inspired air has no less, perhaps even more, influence than the quality of the food; finally, by the continuation or repetition of the irritations.

This brief synopsis will suffice to show how dangerous may be a school with defective arrangements and inefficient superintendence, and how much reason there is to fear that a part of the fatal results of phthisis in the school ages may really be attributed to the school as such, and that in part even the unfavorable termination taking place after school life may be laid to the school period.

5. *Affections of the Abdominal Viscera.*

6. *Contagious Diseases.*

7. *Injuries.*

[We pass over these sections for want of space, because they are of less importance, and no accurate statistical data are adduced. The author finally enumerates the following known injurious agencies and causes of disease pertaining to schools, to which attention should be directed:]

(1.) *The air in the school-room*, the quality of which is determined by the size of the room, the number of pupils, the mode of heating, the ventilation, moisture of the floor and walls, dust (cleanliness).

(2.) *The light*, as determined by the situation of the building and room, the size of the windows and their relation to the desks, the color of the walls and surroundings, artificial light (gas, oil).

(3.) *The sitting* in the school-room, especially the relations of desk and seat, size of the seats, their arrangement, duration of sitting.

(4.) *Bodily exercise*, especially playing, gymnastics, swimming, their relations to sitting and to the purely mental labor, their arrangements and superintendence.

(5.) *Mental exertion*, its duration and variety, the individual amount, the arrangement and duration of recesses and vacations, the extent of home and school exercises, the date of commencement of obligatory attendance, etc.

(6.) The *punishments*, especially corporeal.
(7.) The *water for drinking.*
(8.) The *privies.*
(9.) The *means* (implements) *of instruction*, especially the choice of school books (size of type), and objects of illustration.—*St. Louis Med. and Surg. Journal.*

Ozæna is said to have been cured (three cases) by irrigations of the part with solution of permanganate of potash, 5 parts to 100 of water.

Sycosis is successfully treated by Mr. Stewart with a saturated solution of nitrate of potash, applied three or four times a day. If it produces too much pain it may be diluted.

Phagedenic chancres were arrested in two cases, by Prof. Schwanda, by passing through them the constant electrical current.

Diphtheria was treated by the late Dr. Magruder, of Washington, as it is claimed, with most marked success, on the following plan:

The throat was rubbed frequently, externally, as soon as the swelling and soreness commenced, with spirits of turpentine. Internally, this:

℞. Potassæ chlorat., - - - - - ʒ j;
Tinct. guaiaci comp., - - - - - ʒ ij;
Tinct. cinchonæ, - - - - - ʒ ij;
Mellis, - - - - - - - ʒ ss;
Aq., - - - - - - - ʒ iijss;

M. — S. A tablespoonful every three hours. Twenty drops of the muriated tinct. of iron, an hour and a half after each dose.

It is said that 82 out of 85 cases were successfully treated.

Toothache finds another remedy in a paste made of nitric ether and sulphate of alumina, and applied to the cavity. The most violent odontalgia is promptly relieved, with no chance of injury, and after several applications the aching part is thoroughly anæsthetized.

Common catarrh is treated by Dr. Scudder, thus:

℞. Tinct. verat., - - - - - ʒ ss;
Tinct. gelsemini, - - - - - ʒ j;
Aq., - - - - - - - ʒ iv;

M. — S. A teaspoonful every one or two hours.

The same gentleman treats Neuralgia in feeble persons, or where there is a feeble circulation, with the following, used alternately:

℞. Tinct. aconit. rad., - - - - gtt x;
Tinct. belladonnæ, - - - - - gtt xx;
Aq., - - - - - - - ℥ iv;
M.

℞. Tinct. nucis vomic., - - - - ℥ j;
Aq., - - - - - - - ℥ iv;
M. — S. A teaspoonful every one or two hours.

As prophylactic in Croup, he commends a liniment:

℞. Ol. stillingiæ, - - - - -
Ol. cajeput., - - - - - aa ℥ ij;
Ol. lobeliæ, - - - - - - ℥ j;
Alcohol. 76° - - - - - - ℥ ij;
M. — Direct the mother to rub it on the throat when symptoms are manifested; and if necessary, give a drop on a lump of sugar.

Pertussis. (Valentine Mott).

℞. Acid hydrocyan., - - - - - gtt. vj;
Ext. belladonnæ, - - - - - gr. ij;
Tr. opi., camph., - - - - -
Aq. pur., - - - - - - aa ℥ iij;
Syrup. tolutani, - - - - - ℥ j;
M. — S. A teaspoonful four times a day.

Sore Nipples. (J. G. Wilson).

℞. Plumbi nitratis, - - - - - gr. x;
Glycerin., - - - - - - ℥ j;
M. — Ft. solut.
S. — Apply freely to the excoriated part.

Trismus Nascentium.

Dr. T. L. Papin (*Humboldt Med. Archives*), treated a case thus:

℞. Chloroform, - - - - - - *m* xij;
Sp. æth. sulph., - - . - - *m* xv;
Sodæ bicarb., - - - - - - gr. xij;
Syrup. zingiber, - - - - -
Aq. flor. aurant., - - - - aa ℥ iv;
M. — S. A teaspoonful p. r. n. to allay spasmodic action and secure rest and quiet.

The paroxysms after a while recurring, he resorted to the local application of chloroform to the spine, a small strip of cotton cloth wetted and applied to the entire length. This application,

alternated with emollients when vesication occurred, occasional inhalations and mild purgatives was continued *fifteen* days, when the cure was complete.

Dr. Boisliniere cured a similar case, several years since, administering the chloroform by enema.

Dr. Lehlbach admires the use of carbolic acid, exceedingly. In Impetigo, he uses this ointment:

℞. Acid. carbol. crystal., - - - - ʒ j;
Sodæ sulphit., - - - - - - ʒ ss;
Glycerin. - - - . - - ʒ jss;
Cerat. simp., - - - - - - ʒ ij;

M. — S. Apply three times a day.

In Scabies, he uses:

℞. Ac. carbol. cryst., - - - - ʒ jss;
Flor. sulphur., - - - - - ʒ ss;
Sodæ sulphit., - - - - - ʒ ss;
Glycerin, - - - - - - ij;
Cerat. simp, - - - - - - ʒ ij;

M. — S. Take a bath or wash all over, morning and night, and then anoint thoroughly wherever the disease extends.

The acari are generally killed in three days.

In the Diarrhœa of Children, he thinks it is particularly useful in arresting fermentation, etc. For a child from a year to eighteen months of age, he prescribes:

℞. Pepsin, - - - - - - ʒ ss—ʒ j;
Bismuthi subnit., - - - - - ℈ ss;
Pulv. opi., - - - - - gr. 1-5—1-2;
Acid. carbol. c., - - - - - gr. 1-8—1-2;
Quiniæ sulph., - - - - - gr. j—ij;

M. — In chart. x divid.

S. — One every two or four hours. In some cases he substitutes bromid. potassii for the opium.

Primitive Chancres, whether soft or indurated, are treated by M. Champouillon with powdered camphor. Cicatrization takes place in ten or twelve days in ordinary cases. He thinks bubos less likely to occur. The powder is applied twice a day, taking care *not* to remove the paste formed on the surface oftener than once in two or three days.

Which reminds us that we have seen cases, where *finely pulverized loaf sugar* used in the same way, seemed to accelerate the cure remarkably.

In a case of Hæmoptysis, when local irritation was desired, Dr. Bemiss used this liniment:

℞. Hydrarg. bichlorid., - - - - . gr. ij;
Tinct. iodinii, - - - - - ʒ iv;
Glycerin., - - - - - -
Aq., - - - - - - aa ʒ ij:

M. — Moisten lint or cotton with this and apply p. r. n.

Phthisis is treated by Surgeon Sanger (*Lond. Lancet*, *Sept.*, 1869), with arsenic. He uses the liquor arsenicalis or solution of arsenite of soda in five minim doses, twice a day, combined with a drachm of the citrate of iron wine, or five grains of the citrate of iron and quinine. He exhibits it after eating, and orders it suspended if gastric irritation occurs. In some cases, where iron cannot be borne, he combines each dose with 15 or 20 grains of hyposulphite of soda.

A better plan is to give the Fowler's solution in regularly diminishing doses, and be guided by the influence on nutrition.

Varicose Ulcers.

Several cases are reported in the *Medical Gazette*, cured by Prof. Stephen Smith's method. Dr. Osborn, the reporter, finds it highly satisfactory. It is simple and safe.

"A bandage is tightly drawn around the leg, immediately below the knee, with a compress over both or either of the large veins involved. The patient is requested to throw his weight on the limb to be operated on, and when the vein becomes sufficiently distended, with a hypodermic syringe, having a sharp point, well oiled, inject into the veins below the compress, 3 or 4 minims of liquor ferri persulphatis; withdraw it immediately, placing the finger over the point of puncture, then cover it carefully with adhesive strips (icthyocoll). A fine clot will form from the compress down half an inch to an inch. All air must be forced out of the syringe before throwing in the injection. The compress may be loosened a few hours after the operation, and in a few days it may be removed entirely. The patient is enjoined to rest in a recumbent position for a few days."

This is a very easy and ordinarily safe method of treating these, frequently very troublesome sores, as well as for avoiding danger of rupture of the distended veins.

Drowning.

Dr. Benjamin Howard, of New York, has devised the following method for the restoration from drowning, which seems preferable, in some respects, to the plans usually resorted to, and is well worthy of having its merits tested by careful trial of it:

1. Unless in danger of freezing, never move the patient from the spot where first rescued, nor allow bystanders to screen off the fresh air, but instantly wipe clean the mouth and nostrils, rip and remove all clothing to a little below the waist, rapidly rub dry the exposed part, and give two quick, smarting slaps on the stomach with your open hand.

If this does not succeed immediately, proceed according to the following rules to perform artificial breathing:

2. Turn the patient on his face, a large bundle of tightly rolled clothing being placed beneath his stomach, and press heavily over it upon the spine for half a minute.

3. Turn the patient quickly again on his back, the roll of clothing being so placed beneath it as to make the short ribs bulge prominently forward, and raise them a little higher than the level of the mouth. Let some bystander hold the tip of the tongue out of one corner of the mouth with a dry handkerchief, and hold both hands of the patient together, the arms being stretched forcibly back above the head.

4. Kneel astride the patient's hips, and with your hands resting on his stomach, spread out your fingers so that you can grasp the waist about the short ribs. Now, throw all your weight steadily forward upon your hands, while you at the same time squeeze the ribs deeply, as if you wished to force every thing in the chest upwards out of the mouth. Continue this while you can slowly count — one — two — three; then suddenly let go, with a final push, which springs you back to your first kneeling position. Remain erect upon your knees while you can count — one — two; then throw your weight forward again, as before, repeating the entire motions — at first, about four or five times a minute, increasing the rate gradually to about fifteen times a minute, and continuing with the same regularity of time and motion as is observed in the natural breathing which you are imitating.

5. Continue this treatment, though apparently unsuccessful, for two hours, until the patient begins to breathe; and for a while after this help him, by well-timed pressure, to deepen his first gasps into full, deep breaths; while the friction of the limbs, which should, if possible, have been kept up during the entire process, is now further increased.

6. After-treatment — externally: As soon as the breathing has become perfectly natural, strip the patient rapidly and completely. Enwrap him in blankets only. Put him in bed in a room comfortably warm, but with a free circulation of fresh air, and except for the administration of internal treatment, let him have perfect rest.

Internally: Give a little hot brandy and water, or other stimulant at hand, every ten or fifteen minutes for the first hour, and as often thereafter as may seem expedient.

Cutaneous Affection Caused by the Use of Bromide of Potassium.

Bromide of potassium has been so largely employed of late years in the treatment of a great variety of diseases, that it is well to bear in mind that it may itself induce certain cutaneous affections, and these have been particularly noted by M. Voison. He enumerates no less than five, namely:

1. An eruption resembling acne, affecting principally the face and chest, accompanied by more or less itching, and rarely with fever. This may occur when not more than a drachm has been ingested.

2. Amongst ninety-six epileptics treated with bromide of potassium, there occurred, six times, large, elongated, rose or cherry-red swellings, half an inch or more in diameter, on the surface of which collections of pustules, also resembling acne, were developed. The swellings occurred invariably on the lower extremities, and were extremely painful. They healed very slowly, thick crusts forming, leaving indelible yellow spots, covered with scales.

3. On two occasions an exanthematous eruption, resembling erythema nodosum, appeared, though unaccompanied by any febrile symptoms, which lasted for more than six months.

4. Very troublesome furunculosis, or succession of boils with carbuncles on the neck.

5. In one instance an eczematous eruption appeared on the legs, which lasted for a year, and was accompanied by profuse secretion. In this instance, also, the greater part of the head was affected with pityriasis.

The treatment recommended by M. Voisin, as generally applicable for these cutaneous affections, consists in the administration of alkaline drinks and baths, sudorifics, local emollients, etc. — *Practitioner, Oct.*, 1869, *from Centralblatt.*

Therapeutic.

Mr. Editor. — I would like to ask, in your journal, for the remedy *warranted* to cure a case of leucorrhœa, in a young girl, aged 15; well developed physically — menses well established — free and regular — health apparently good, but continually troubled with a discharge, staining the linens yellow; perhaps patient rather scrofulous, inclined to increased secretions from mucous surfaces. J. L. W.

We never *warrant* our patients any thing, except that we will do our best. For the case, as it stands, we would suggest Sep., and recommend a "voyage of discovery." Doctor, are there no concomitant symptoms? Look for a cause. A case somewhat similar was caused by a *spool of thread!* — *Med. Investigator.*

External Use of Digitalis as a Diuretic.

Dr. Brown has succeeded in re-establishing the renal function in six cases of calculus of the kidney, when all other measures had been tried without effect, by the external use of digitalis in the form of poultices made either by throwing the fresh leaves into boiling water, or by incorporating the concentrated tincture with linseed meal. A rapid fall of the pulse follows the application. The cataplasms made with the leaves are especially to be recommended, and they should be renewed every six hours till the lowering of the pulse warns us to desist. — *Dublin Quart. Journal Med. Sci.*, *August*, 1869, *from Rev. de Thér.*, *Dec.*, 1868.

Which reminds us of old-time usages. Here are a couple of ancient prescriptions for the production of diuresis:

℞ Tinct. Digital., Tinct. Scillæ, - - - -
Linim. Sapon. and Opi., - - - - aa ℥ ij;
Aq. Ammon., Ol. Camph, - - - aa ℥ ss;
Tinct. Cantharid. Fort., - - - - ℥ ij;

M. — S. To be rubbed in freely, over the surface, three times a day.

℞ Liniment. Volatil., - - - - - partes ij;
Tinct. Cantharid., Tinct. Digital., - -
Tinct. Colchici, Tinct. Iodin., - - - aa p. j;

M. — S. Apply over half the body, three times a day.

Management of After-pains.

Prof. T. Gaillard Thomas, M.D., in a "Lecture on the Management of Woman after Parturition," gives us the following timely hints:

The less firmly a uterus contracts, the more severe are the after-pains, for firm contraction expels these clots, and thus the cause of the painful contraction disappears. For this reason, after first labors, they do not occur. To cause firm uterine contraction, administer a full dose of ergot, just after, or during the stage, in every case. Ergot never does harm, but fulfills an indication of great importance, and guards against the liability of hæmorrhage. Should this means fail, let the opiate be given before the obstetrician leaves the house. An excellent combination, which he habitually employs for this purpose, is the following:

℞ Chloroformi (Squibbs), - - - - ℥ ijss;
Morphiæ Sulph., - - - - - - gr. ijss;
Syrupi, - - - - - - ℥ ij;

M. — A teaspoonful every hour till relieved. — *Rich. and Lou. Med. Jour.*

THE

Chicago Medical Journal.

A MONTHLY RECORD OF

Medicine, Surgery, and the Collateral Sciences.

EDITED BY J. ADAMS ALLEN, M.D., LL.D.; AND WALTER HAY, M.D.

VOL. XXVI. — DECEMBER, 1869. — No. 21.

Original Translations.

ARTICLE I. — *Clinical Lectures upon Mental and Nervous Diseases; Alcoholism, Alcohol and Absinthe, Absinthic Epilepsy.* By M. MAGNAN, Sainte Anne, Paris.

(CONTINUED FROM PAGE 631).

§ III.—COMPARATIVE investigations with the different substances which enter into the composition of the absinthe-liquor, have been made under the most diverse conditions upon dogs, cats, rabbits, rats, guinea-pigs, and different birds. Since our first experiments, extending back to 1864, we have used, so far as it was possible, products of the same quality; we have procured from the house Chardin-Hadancourt, all the essences which we have used.

Physiological phenomena of little importance have resulted from using the essences of anise, star-anise, angelica, calamus aromaticus, origanum, fennel, mint and balm, although used in enormous doses, such as 15 to 20 grammes introduced into the stomach of a dog of medium size. The respiration was, generally, accelerated; the pulse became frequent; but the animal preserved his accustomed movements, he ate with good appetite and did not appear to be much inconvenienced.

During several hours, sometimes even during two or three days, the pulmonary exhalation diffused the peculiar odor of the substance ingested; the stools were likewise impregnated with the same odor. Essence of fennel placed under a bell-glass exhaled irritating vapors capable of producing lacrymation, cough, and sometimes salivation. In no case, let it be specially noted, did we detect *epileptic* or *epileptiform convulsions.*

It remains for us now to determine the effects produced by the essence of absinthe, and when we shall have been fully instructed in the action of each one of these substances taken separately, we shall see how certain phenomena are developed under the influence of mixtures of alcohol and essence of absinthe.

Whenever the essence of absinthe is absorbed, certain phenomena appear, whose duration and intensity are in direct ratio to the dose of the poison which has passed into the circulation.

Thus whilst a few centigrammes injected into the veins of a dog sufficed to develop symptoms, it was necessary to use three or four grammes, and sometimes more, when the poison was introduced into the stomach.

M. Magnan indicates the precautions to be taken in these experiments, the difficulties to be encountered according to the animals experimented with, according to the channel of absorption employed, whether the digestive tube (stomach or rectum), the pulmonary mucous surface, the cellular tissue or even the veins directly; whatever may be the route traversed by the poison in order to reach the nervous centres, the following symptoms will be observed:

When small doses of the essence of absinthe have been absorbed, there will be seen, soon afterwards, muscular tremors more or less marked, little, abrupt, interrupted shocks like electric discharges, repeating themselves one or more times in the muscles of the neck, and occasioning rapid and very circumscribed movements of the head, which is carried upward and backward; these contractions involve successively the muscles of the shoulders and of the back, and then induce abrupt shocks, exciting in spots and by jerks the anterior portion of the body; the animal cowers, gathers himself together, and seems to resist with all his force these powerful discharges. This is not all: under certain circumstances, in the case of the dog, a very interesting phenomenon supervenes.

The animal stops suddenly, remains motionless, as if stupefied, with lowered head, gloomy countenance, and drooping tail; and retains this attitude during one-half to two minutes, then resumes spontaneously his accustomed movements. This is a vertiginous state, which is not wanting in analogy to the "petit mal," or absent-mindedness of the epileptic.

The effect of the essence of absinthe in large doses is different, or rather there is a greater degree of intensity of the phenomena. After prodroma analogous to the symptoms just described, or even abruptly and more or less rapidly, according to the channel of introduction of the poison, attacks supervene in which the animal falls suddenly, with trismus, tonic convulsions predominating sometimes on one side of the body, and inducing a curvature, in which one side rests upon the ground by its middle portion, whilst the two extremities are elevated and bent upon the opposite side, approximate to each other.

To these tonic convulsions succeed, at the end of some minutes, clonic convulsions with chattering of the jaws, which interlock, or approximate convulsively without actually coming in contact entirely; next froth appears upon the lips, and sometimes the tongue is bitten; then stertorous respiration, evacuation of urine and fœcal matters, and sometimes of semen.

After the termination of the attack the animal retains, ordinarily, a slight degree of stupidity, but subsequently resumes his habitual condition; these attacks of epilepsy manifest themselves, sometimes, with this series of symptoms complete, having intervals between them of ten or twenty minutes or even more. Under the circumstances most frequently presented when the poison has been introduced into the stomach, a clear idea may be formed of the phenomena: but it is not always so; some symptoms may be wanting, or perhaps may succeed each other so rapidly as to be confounded. In some cases the attacks succeed each other without interruption, and thus there may be complicated, confused attacks with obstreperous convulsive rapid phenomena, in the midst of which the epileptic seizure is distinguished less clearly.

But as, in the same animal, after two or three isolated attacks, there may sometimes be seen to occur successive seizures which encroach upon each other in the manner of intercurrent acces-

sions so as to constitute complicated attacks, by closely following the progress of the symptoms, the characteristics of the seizure may be detected in the midst of the confused scene. During the interval of the convulsive accessions, in the case of the dog, sometimes, real hallucinations may be witnessed. The animal elevates himself upon his paws, with bristling hair, frightened countenance, brilliant and blood-shot eyes staring fixedly, he barks furiously, advancing and receding as if in the presence of an enemy, then he becomes gradually more calm, and still growling for a few moments, finally becomes quiet. These phenomena, thus clearly outlined, only manifest themselves very rarely in the course of the experiments; but, however, the animal is frequently seen to exhibit, by his movements, a terror more or less acute.

In order to show you in a still more striking manner, the independence between the action of the cord and that of the brain, in the production of these two orders of facts, epileptic attacks on the one hand, fright and hallucination on the other, we shall subject to the action of absinthe, these two pigeons and this guinea-pig, from which the cerebral lobes have been removed. The convulsive attacks will be presented here, with the same characteristics as in those animals which have not undergone any mutilation. The poison acts, therefore, upon the entire cerebro-spinal system; but the appearance of cerebral phenomena in the intervals of the attacks, makes it evident that the action upon the different portions of the nervous centres can not be simultaneous; the brain, indeed, seems to enter into action when the other portions, being exhausted, are in repose, and reciprocally.

We have now acquired a tolerably complete notion of the comparative action of alcohol and of essence of absinthe; it remains to determine the effects produced upon the economy by the combination of these two agents administered at the same time.

§ IV.—If a mixture of alcohol and essence of absinthe be administered to an animal, at first alcoholic intoxication will be perceived, then the convulsive phenomena peculiar to absinthe, after a delay of one or more hours.

How is this tardy appearance of absinthic convulsions to be explained? We believe that it should be attributed to the action of the alcohol upon gastric digestion and absorption, an action which the experiments of M. Claude Bernard with ether and

alcohol have perfectly demonstrated. Ether, you know, gentlemen, increases secretion, promotes digestion and absorption. Alcohol, on the contrary, diminishes and arrests secretion, retards digestion and absorption. It is no longer an excitant, it is an irritant.

I exhibit to you here, a dog, to which we have administered sixty grammes of alcohol, and four grammes of essence of absinthe. He is plunged, at this moment, into alcoholic intoxication. The absinthic convulsions will not be manifested until much later; nevertheless, the poison has already commenced to enter the circulation, since we can, by approaching the nostrils of this animal, determine, at each expiration, a decided odor of absinthe.

The delay in the gastric absorption, is not, however, the only cause which hinders the appearance of convulsive phenomena; there is, in addition, the action of the alcohol upon the nervous centres, rendering them temporarily less sensitive. The following experiment will furnish us a demonstration of this:

You have before you, a second dog, which, after having taken seventy grammes of alcohol, is perceived to be in a state of complete resolution. Disregarding the stomach, we will inject into a vein a few centigrammes of essence of absinthe. If the retardation of gastric absorption, due to alcohol, be the cause of the delay in the development of the symptoms, we shall see, in this case, the channel of absorption having been changed, the convulsive phenomena, at the end of a few minutes, as in those cases in which injection into the veins is performed upon a perfectly healthy dog, and, in fact, this is exactly what happens. You perceive the animal exhibits an epileptic attack; then, all is over, and we again recognize the condition of complete resolution. What does this experiment indicate? It shows us first, that, in the case of the first dog, the postponement of the convulsions was occasioned by the influence of the alcohol in the stomach. Next, that this postponement does not take place in a dog equally "alcoholized," when the absinthe is injected into a vein. In the second place, it demonstrates the influence of alcohol upon the cord, of which the excito-motor power seems diminished, since we have recognized in the alcoholized dog, but a single attack in place of a tolerably long continued succession of convulsive

symptoms, as in the case of the animal submitted exclusively to the action of absinthe.

To sum up, the effects of alcohol and of absinthe are combined in the same subject, but a postponement and a slight diminution of intensity may be detected in the absinthic convulsions. In the case of animals dead in consequence of absinthic intoxication, the presence of the poison in the different organs may be determined by the odor. For this method of examination, certain precautions must be taken on account of the penetrating odor of the absinthe, which diffuses itself everywhere, and which would prevent the formation of very precise ideas of the impregnation of the organs by this substance, at least in the immediate locality of the autopsy. The cerebro-spinal membranes will be found to be injected, but it is rare to find sanguineous infiltrations in their thickness. It is generally in the middle of the medulla oblongata and in its vicinity, that the hyperæmia predominates. We have sometimes detected in the medullo-cervical region, a sanguineous infiltration of the pia-mater.

The brain cut into thin slices exhibits, like the cord, a faint diffused injection, without foci. The stomach presents, exceptionally, hæmorrhages into the thickness of its coats, whilst by the action of alcohol it becomes the seat, as we have seen, of lesions ordinarily very intense.

The pericardium, and in some cases the endocardium, presents little circumscribed ecchymoses, more numerous at the base of the heart, near the origin of the great vessels.

The lungs, usually slightly injected, may exceptionally, be infiltrated with blood at several points.

Nothing is found in other organs sufficiently constant, to deserve special notice.

The investigations which we have just made will enable us the better to appreciate in man the immediate effects of spirituous drinks, and to separate from simple acute alcoholism certain symptoms, such as the epileptic attacks, which never pertain to alcohol, but which depend almost exclusively upon absinthe. Whenever, accidentally, an individual drinks to excess, he becomes drunk. If these excesses are repeated several times, there is not much delay in the production of new phenomena, both intellectual and physical, and authors justly discriminate between drunkenness and acute alcoholic mania, or *delirium tremens*.

I shall recur, later, to the symptoms of drunkenness in man, as we shall compare the phenomena observed in animals, in order to demonstrate their identity. I shall not dwell, at this time, upon the particular condition designated by Percy by the title of *convulsive drunkenness*, in which the motor disturbances consist in clonic convulsions, very irregular, and without determinate character.*

Acute alcoholic mania, or *delirium tremens*, supervenes after repeated excesses in drinking, and ordinarily in persons habituated to drinking, when, by the aid of libations (potations?) more abundant than usual, they have exceeded their limit of saturation. It is upon this soil, thus prepared, that frequently acute symptoms are developed. It is the more necessary to bear this in mind, because you will perceive, in this fact, the explanation of certain phenomena which it would be difficult to attribute to intoxication. Sometimes, indeed, in the alcoholized, a multiple and variable delirium supervenes, but with which the special delirium of alcoholism manifests itself. This multiple delirium is found to be in relation to the cerebral state of the individual anterior to the last debauch. The alcohol may indeed conduce to the development of this multiple delirium, as an exciting cause, but never as an efficient cause. In other words, alcohol produces only alcoholic delirium; the other forms of delirium which may appear at times during alcoholism depend, I repeat it, not upon the poison itself, but upon the anterior state of the individual.

In those cases, again, in which the patient was primitively insane, the poison does not fail in its legitimate results; if the dose be sufficient, it invariably produces its peculiar delirium; this, however, is superadded to the anterior mental trouble, and by reason of its acuteness, in some cases, masks it completely, to the degree of rendering possible only the sole portion of the diagnosis referable to the alcoholic symptoms.

This is what happens, gentlemen, in general paralysis, especially during its first period; at this time, the symptoms of the disease are slightly marked, the physical disturbances are confused and disappear in the midst of the tumultuous trembling of the *delirium tremens;* the paralytic delirium, hardly sketched

* Ivresse Convulsive. *Dictionaire des Sciences Médicale*, 1818, p. 249.

out, is likewise obliterated before the prodigious activity of the alcoholic hallucinations. As the memory is wanting, it is necessary to await the diminution of these tumultuous phenomena, in order to perceive the different signs of general paralysis emerging.

You will have the opportunity to see, amongst the different patients which we shall examine together, two paralytics who have drunk to excess. In one of them we can not, at this moment, detect any thing beyond an attack of *delirium tremens*, if his perfectly well known antecedents did not aid us in completing the diagnosis; this, moreover, will become directly possible in a few days, when the alcoholic symptoms shall have amended. We will endeavor to determine the characters peculiar to acute alcoholic mania, or *delirium tremens*.

The symptoms arrange themselves naturally into two classes—intellectual disturbances, and physical disturbances. The phenomena on the part of the intellect consist especially in hallucinations, exceptionally of a joyous character, nearly always, on the contrary, as has been remarked long since, of a painful nature, and as M. Marcel says, determining moral impressions, of which the slightest would be astonishment, and the most vivid a profound horror.*

These hallucinations, according to their degree of intensity, according, likewise, to the disposition of the subject, give place to different reactions, capable of changing completely the physiognomy of the patient.

Hence, the maniacal, melancholic, stupid forms of alcoholic madness, forms which might be multiplied, but without real profit, if it were desirable to express all the aspects under which the disease can present itself. But whence does it happen that one and the same cause, a poison, determines symptoms so different?

These hallucinations, as we have said, which have for their common characteristic the awakening of painful sentiments, present, in their mode of expression, different degrees.

In the first degree, the patient thinks that he hears abuse and provocations; he sees thieves, policemen, animals, or even that

* *De la folie causée par l'abus des boissons alcoholiques.* Marcel. Thèse de 1847, p. 12.

he hears the voices of his parents, of his friends, who call him, who point out dangers, who invoke his assistance, etc.

Spurred on by these imaginings, the patient replies, threatens, quarrels, runs, dashes himself about, becomes furious, etc., quite as many acts which provoke in him turbulent manifestations, a maniacal condition.

Under other circumstances, he fancies himself in prison, before a tribunal; he is accused of different crimes, and sometimes imagines that he has committed them, believes himself deceived by his wife, by his friends, assists at the burial of his parents, etc. Under the weight of these sad impressions he is sombre, restless, defiant; he complains, is frightened, endeavors to fly, sometimes even conceives projects of homicide or of suicide; he appears, in a word, in the aspect of a melancholic.

Finally, at a point still more advanced, he imagines himself loaded with chains, at the foot of the scaffold; he sees before him the bloody corpses of children; all is on fire; he is about to be ingulphed, etc. These imaginations have crushed him, exhausted him; he remains motionless in a state of complete stupor.

Between these different conditions — maniac, melancholic, stupid — you understand, gentlemen, that numerous intermediate stages may be intercalated; but it will suffice for us to indicate it, by so much the more, that by following any one of the patients who are actually found in our wards, it will be possible to perceive, in the same subject, these different forms successively evolved. The direct examination of a patient will, much better than any description, impress upon the mind a clear idea of these varied transformations.

Permit me, gentlemen, to make a rapid analysis of these phenomena. But, first, it will not be uninteresting to dwell upon the development of those symptoms which do not present themselves from the beginning with such prominent characteristics.

A successive gradation, both in the intensity of the phenomena, and in their mode of evolution, may be observed. It proceeds from simple functional disturbance to illusion; from this to confused hallucination, which becomes by degrees distinct and precise hallucination, which is the highest degree. Then in proportion as amelioration progresses, the phenomena gradually disappear, following the same order; that is to say, precise hallucina-

tions yield to confused hallucinations, these to illusions, which, in their turn, are followed by simple functional disturbance.

Such is the habitual evolution of hallucinations in the course of alcoholism. Exceptionally, however, they may reach their climax suddenly.

It is ordinarily at night that these accidents manifest themselves at first, and it is difficult to determine exactly their mode of evolution, in consequence of the confused recollection which patients preserve of them. I can at least indicate to you with certainty their mode of disappearance. Hallucinations at first persist during the day and night, commencing to disappear during the day, to be reproduced at night with the same degree of intensity; then becoming less clear, they appear at the moment of transition from wakefulness to sleep; next, only nightmare remains, which persists for a few moments after the subject awakens, then finally dreams; and, later still, the patient appreciates, with a certain degree of accuracy, all these sensorial troubles, which terminate by disappearing completely. Thus, at first, hallucinations by day and night, then only at night; later, confused hallucinations and illusions at the moment of transition from wakefulness to sleep; then during sleep, with restless awakening; then, lastly, nightmares, dreams, and restoration to health.

It will be easy for you, gentlemen, to follow this retrograde movement in the majority of patients, however imperfectly you may fix your attention upon this point. In proportion as they are cured, they remark to themselves, with pleasure, the favorable changes which occur, and some are capable of recalling them in a very graphic manner.

Let us see, now, how these phenomena are developed, in each direction. To the hearing, the first sensations are roaring, whistling, tinkling, ringing of bells, which the patient imagines a funeral toll; next, confused noises, crashing, tumults, riots, fusillades; still later, cries of distress, confused voices, distinct voices, those of friends, of parents; then, again, abuse, menaces, accusations, clearly stated, etc., aural hallucinations the most distinct.

To the sight, the symptoms present themselves in the same manner; vision is disturbed, is obscured with mists, it perceives sparks, flames, various colors, shadows, tremulous objects, phan-

toms, then confused sensations of conflagrations, of precipices, of battles. In some cases, the patient perceives a dark spot, blackish, with diffused margin, then with distinct limits and prolongations, which become paws, and a head, and form an animal, a rat, a cat, a lion, etc., soldiers, police, assassins, etc. These are a few of the complicated troubles which are imposed upon the vision of the drunkard.

The perversions, illusions and hallucinations of the senses of taste and smell, are less numerous and less varied; nevertheless the drunkard escapes neither offensive tastes nor odors.

The general sensibility, with its different phases of anæsthesia and hyperæsthesia, furnishes, likewise, its contingent of painful sensations, and frequently its disturbances are associated with those of the other senses. Thus some inebriates see and feel animals penetrating and tearing their skin and flesh; or themselves surrounded by bands of iron which inlace, inclose and oppress them. They busy themselves in untwisting these metallic meshes, which incessantly reunite; or they may even see a portion of their bodies gnawed by worms. They pick them off, and struggle, in the midst of the greatest anxiety, to detach and cast them to the earth. I shall not attempt to picture to you the anguish of these wretches; every inebriate who is presented to you will enable you to complete the somewhat hurried enumeration which I have made of these symptoms.

I shall not dwell, to-day, upon certain disturbances, which involve digestion and nutrition. I will, however, say, concerning the condition of the urine, that according to our physiological experiments, and especially according to our clinical investigations, the presence of albumen in the urine must be considered a very unusual incident in acute alcoholism.

The phenomena which occur in connection with mobility, are very remarkable; the shivering of the whole body, the general tremor, the convulsive trembling of all the muscles of the face, of the hands, of the legs, are exhibited to this degree in acute alcoholism alone. It is not necessary, in order to observe them, to exact from the patient certain movements, certain positions demanding a little more certainty, and more favorable, consequently, to the appreciation of the disorder. The most simple movements suffice to render evident the intensity of the motor

trouble. If the patient seizes you, you perceive that his fingers press in an irregular manner, so that the hand closes convulsively, or else a sort of arrest occurs.

Should he attempt to speak, in the midst of the muscular quivering, slight convulsive jerks may be observed, giving the countenance an expression of grimace. When the arms are extended, besides the trembling in mass, little, irregular, unequal shocks manifest themselves in the greater portion of the muscles. In some parts the tendons become abruptly prominent, and by the application of the hand very irregular contractions will soon be detected.

In the opinion of most physicians, these very considerable lesions of mobility are the necessary preliminary steps toward convulsive epileptic symptoms. After these, consequently, the epileptic crisis should be developed as the last term of the muscular disorders of acute alcoholism, and would always be the index of a grave condition. It is not so, gentlemen; the epileptic attack is not, in acute alcoholic mania, the highest expression of motor disturbance; it is an accident independent of the other phenomena Certain patients indeed, sometimes, exhibit tremor of frightful intensity, and, nevertheless, they manifest no epilepsy. Others, on the contrary, have almost no tremor, and you perceive them suddenly surprised by the attack. These occurrences will no longer astonish you; you understand their explanation.

Foreign Items.

Imperial Academy of Medicine. Session of September 14, 1869.

M. Chassaignac read the following paper upon the subject of Vaccinal Syphilis:

Without taking any direct part in the discussion, I desire to present a document of a character I believe to dissipate the doubts expressed by several of our colleagues.

The first example of vaccinal syphilis which has been demonstrated in the hospitals of Paris dates from 1863. It is, conse-

quently, much anterior to the majority of the evidence adduced in the discussion.

This fact, regarded as demonstrating the real existence of vaccinal syphilis, or syphilis by vaccination, is of decisive precision and authenticity. It had for witnesses the medical staff of one of the large hospitals of Paris; and upon two successive occasions during the evolution of vaccinal-syphilitic-symptoms, a society perfectly competent upon questions of this character.

A child, aged two years, which had been nursed by its mother, and whose father and mother were both free from every syphilitic affection, was brought into my department, at Lariboisière, the 18th of August, 1863. This child had been vaccinated at the mayoralty of Montmartre, seven weeks before, the 27th of June, 1863. Upon the third day the first vaccinal eruption developed itself; the pustules suppurated toward the 9th of June (July?). They dessicated, the crusts fell the 15th day, and the cicatrices appeared definite.

Some days afterwards, three of the vaccinal cicatrices were replaced by ulcerations which suppurated, enlarged, assumed the dimensions of a 50-centime piece, became covered with a crust thick at the edges, thin in the centre. These ulcerations were indolent and rested upon an indurated base. The axillary ganglia were engorged, as were likewise the cervical ganglia. Upon the right ear a copper-colored papule appeared, covered with little grayish scales of entirely characteristic appearance. Upon the chest, the abdomen, and the back, appeared an eruption presenting a slight relief of a red color, coppery at certain points, especially upon the upper portion of the chest.

The surgical society, through its members most competent in such matters, recognized without hesitation, and positively affirmed the existence of vaccinal syphilis.

Lastly, in order to shun every pretext for dispute, the child was submitted to no treatment up to the second presentation, which occurred eight days from date. At this second session the affirmations of my colleagues were yet more decisive and more circumstantial. The coppery patches which, eight days before, commenced to appear, were upon the 27th of September altogether characteristic. The English physicians caused a colored drawing of the little syphilitic to be taken. Doctor Druitt pre-

sented to the obstetrical society of London the drawings taken on the 19th of September; that is to say, twelve weeks after the vaccination.

M. Chassaignac exhibited these drawings to his colleagues.—*Gazette des Hopitaux, Paris.*

In the course of his remarks upon animal vaccination, made before the Academy of Medicine, Paris, September 24, 1869, M. Jules Guérin asserted his belief that Jennerian (human) vaccine, in general, had not undergone degeneration, whilst it undoubtedly had done so, in exceptional cases, temporarily, and from various causes. He quotes, in support of his opinion, M. le docteur d'Aquino Fonseca, of Pernambuco (Brazil), Commissioner-General of Vaccine, who, during a series of years, produced exactly similar results from the repeated use of the same virus, transmitted from subject to subject. M. Caradec, physician to the hospital at Brest, and M. Brochard, of Nogent le Rotru, who, after transmitting the virus through "*thousands*" of cases, found it unimpaired in activity. Also M. Bonafont, who, having originally introduced vaccine into Algeria, in 1834–5, by means of two crusts forwarded to him by the Academy, at Paris, with which he vaccinated four infants, and the virus from this, the sole source of vaccine in Algeria, has been transmitted to the present time unimpaired.

With regard to vaccinal syphilis, which he alleges to be the principal pretext for the substitution of animal for human vaccine, he indorses the assertion of M. Blot, "that neither M. Depaul, nor any one else, has advanced a single clear and authentic fact capable of demonstrating that vaccine virus alone has ever inoculated syphilis."

And, further, he asserts that "the experiments of M. Delzenne prove positively that the inoculation of vaccine virus taken from a *syphilitic vaccinifere* is absolutely incapable of producing vaccinal syphilis."

Finally, "I believe I have established, on the one hand, the impossibility of the simultaneous existence of the vaccine pustule and the infecting chancre, and, on the other, the necessary succession and separation of these two transitory organisms in order to produce the virus which belongs to them."

THE Surgery of the Italian Campaign of 1866. Clinical observations by Doctor Rodolphi.

After a relation of the prominent surgical incidents observed during the last campaign for Italian independence, the author traces conclusions which he hopes "will not be useless to those who may be called in the future to aid other victims of war."

1st. Permanent and absolute immobility of a limb wounded in one of its articulations suspends pain, and prevents nearly always the necessity of amputation.

2nd. The apparata of Bonnet, of iron or copper wire, being elastic, and not rigid, are not appropriate to favor the healing of wounds of articulations; applied to fractures, they permit frequent and painful contractions in the wounded limbs, because they transmit the oscillations of the bed, or perhaps because they develop electric currents when the wounds are covered with emollient cataplasmata.

3rd. Amputations of limbs should be avoided as much as possible, and should be resorted to only when there is clear evidence that there is remaining no probability of cure by means of conservative surgery.

4th. Flap amputations resulted in the most prompt cures. Teale's method for amputation of the thigh should be preferred in cases of free election, because it secures the impossibility of protrusion of the stump, a free issue for the pus, and a cicatrix of favorable form. The patella-flap of Gritti may afford the best results.

5th. The internal administration of sulphites is not the most certain means to establish the truth of the doctrine of ferments of Professor Polli. The development of sulphites in the intestinal tube is the best means to attain, probably, incontestible results.

6th. The only means to arrest hæmorrhages of the face, produced by gun-shot wounds, is the application of ice with pressure. The per-chloride of iron sometimes determines severe syncope; the other hæmostatics, astringent and caustic, are of difficult application; and the actual cautery, especially when the wound communicates with the baccal cavity, can not reach the openings through which the blood escapes.

7th. Drainage has demonstrated, once more, its practical utility in purulent infiltrations, and in vast collections of pus.

8th. Nélaton's probe may induce grave errors with regard to the locality in which a projectile may be found. With a canula, which a porcelain button secures from every contact, nothing better is required.

The electric sound of Favre, concealed in a protecting tube of gutta-percha, may supply a valuable assistant in the discovery of a ball buried in the tissues, especially by adapting to it the modifications which we have proposed. We have not experimented with the electric sound.

9th. Ball-forceps, with toothed blades, are, so to speak, abandoned; those which are better adapted to the new system of conical balls, are those already used by American surgeons, and especially those of Ferguson, modified by us.—*Gazetta Medica Italiana di Lombardia.*

A PRISONER at Pentonville prison (England) was seized suddenly with vomiting of blood, and at the end of a few hours died from these repeated hæmorrhages. At the autopsy a counterfeit half-crown piece was discovered lodged in a pouch formed in the æsophagus, and which had occasioned ulceration and perforation of the aorta. The prisoner had been engaged in passing counterfeit money, and one day, in order to avoid detection, had swallowed this half-crown. This incident occurred ten or eleven months before his death. A remarkable feature in the case was the entire absence of all difficulty in deglutition, or of any other symptom which could indicate the presence of a foreign body in the æsophagus.—*British Med. Jour. Gazette Medicale.*

Ovariotomy in a Girl Twelve Years Old.

DR. JOUON, of Nantes, has removed an ovarian tumor, weighing twenty pounds, from a girl only twelve years old, who had never menstruated. A long, narrow pedicle was secured by a clamp, and the patient recovered. The case is reported in the *Gazette Hebdomadaire.* This is probably the youngest patient on whom ovariotomy has been performed, as Mr. Spencer Wells' youngest patient was fourteen. She had not menstruated, and also recovered. Mr. Wells has had three successful cases in girls of seventeen.—*Med. Times and Gaz., Oct.* 9, 1869. *Medical News.*

Foreign Correspondence.

PARIS, *Nov.* 19, 1869.

MR. EDITOR: It may be interesting to some of your readers to know what takes part of the attention of the medical profession in Paris.

At the Academy of Sciences, presided by M. Claude Bernard, on the 2nd of November, M. Bouchut gave the following statements concerning the hydrate of chloral — formed by union of chlorine with alcohol. He said that it is a powerful sedative of the motor and sensitive nervous system. If it is not crystallized and very pure, so as to disengage, under the influence of Potassium, vapors of chloroform without coloring the liquid, it is unfaithful, and may be very dangerous.

The dose ought not to be more than 5 grammes for an adult, for children, must begin with 1 or 2 grammes. (The French gramme is about 20 grains English.) It can be administered by the mouth, or by the rectum, which produces the same effect as when introduced into the stomach. It is dangerous to use it for hypodermic injection. Arterial tension augments under the influence of sleep produced by this medicament; the pulse, at the same time, becomes more frequent, and diminishes after waking.

Its absorption by the rectum takes place sooner than by the stomach.

The urine produced by it during sleep is neutral, and boiled with Fehling's solution does not reduce the salts of copper; but, twenty-four hours after waking, when the urine then contains chloral, it becomes more dense and reduces the copper salts. At this moment we might be led to consider that there was a temporary glycosuria which does not exist.

The action of chloral is similar to that of chloroform, but is slower to be produced, and lasts much longer. It produces, with certain patients, a muscular and moral agitation resembling alcoholic intoxication, but has nothing disagreeable or disgusting.

With nearly all it produces sleep, rarely accompanied with hyperesthesia, and, in the great majority of cases, is remarkable for a very strongly accentuated anæsthesia. This latter is in pro-

portion to the dose; this being from 2 to 5 grammes, according to the age, produces complete anæsthesia, and permits, without pain, cauterization with Vienna caustic, extraction of teeth, etc.

As a therapeutical agent, it is a sedative of the violent pains of gout, of nephritic colic, of dental caries; in fact, is the first of anæsthesias administered by the stomach.

It is the most prompt and efficacious remedy to employ in intense chorea, when we wish to make rapidly cease that agitation which, of itself, menaces the life of the patient.

M. Personne, experimenting on dogs with this medicament, has found that the chloral partially transforms itself into chloroform, by the influence of the alkalinity of the blood; and that after the administration of pure chloral, its presence can be chemically recognized in the blood and in the other fluids of the economy.

M. Dumas confessed, at the same meeting, that he, as well as Liebig and other distinguished chemists, had long known this chloral, without having ascertained its physiological and therapeutical properties.

On the 20th of September, M. Demarquay said, at the Academy of Medicine, that in twenty cases experimented on, six were negative. In fourteen cases where sleep was complete (twelve women and two men), in was produced in fifteen to thirty minutes. He gave 1 gramme in a spoonful of the sirup of the balsam of tolu. There were no accidents. That sleep is slight, and resembles not at all that produced by chloroform. That the least noise wakes the patient, but directly he falls asleep again. That their sleep was troubled with dreams and hallucinations. That the smallest pricking, a simple pressure, causes the patients to complain, and they immediately withdraw the part of the body touched. That chloral is not in the least an anæsthetic.

The assertions of this gentleman, we must remember, were made two months ago, and that he only employed small doses.

M. Bouchut, who certainly is good authority, distinctly declares the medicament to be a very strong anæsthetic when employed in sufficient doses.

Aqua Puncture.—Such is the name of a new and ingenious method of revulsion, created by M. Mathieu, one of the most skillful manufacturers of surgical instruments in Paris. It con-

sists of a forcing pump, having attached to it a metallic tube, terminating in its further extremity in a filiform manner, thus allowing, by pressure on the lever of the pump, a capillary jet of pure water to flow with sufficient force to penetrate the cellular tissue beneath the skin. This puncturing of the skin causes a slight, white elevation, from the centre of which sometimes flows a drop of blood. The first pain, caused by the puncturing of the skin, is quite severe, causing the patient to start up pretty briskly. He will sometimes allow fifteen or twenty punctures to be made at one sitting. In less than half an hour the water injected has been absorbed, and the pain has gradually disappeared.

I have seen this ludicrous method employed on a large number of patients at the genito-urinary clinic of Dr. Mallez. It certainly causes various muscular and neuralgic pains to disappear, at least for a certain time, better and quicker than many other revulsives. M. Mathieu relates some cases of permanent cure of these disagreeable pains. Although the instrument is just getting introduced into several of the private cliniques in Paris, and into no hospital as I have seen, yet the inventor says he used it some three or four years ago. It is a nice instrument to have in one's office, as it amuses the patients, does them no harm, and often relieves them very much. As this article is more therapeutical than otherwise, allow me to terminate by noticing another practical instrument just invented by M. Deulafoy, a young Paris doctor.

It was presented at the Academy of Medicine, November 2, and consists of a long canular-trocar, attached to a pump. The canula are minute and long, so as to be thrust through any tissue or organ in search of fluid, and at the same time allowing no entrance of air. The seat of an abscess, the presence of urinary, serous or purulent effusion, may thus easily be ascertained, and its nature determined by microscopical examination.

It is useful not only for diagnosis, but also for treatment, as injections are readily made with it.

As suction can be made, fluid can surely be withdrawn, when the ordinary capillary canula still leaves the surgeon in the dark as to diagnosis, for reasons too clear here to be mentioned.

We augur for this instrument a very favorable reception.

A. W. Bosworth, M.D.

Original Communications.

ARTICLE I. — *A Case of Monstrosity.* By E. R. HUTCHINS, M.D., Philadelphia.

I SEND you, herewith, a photograph of one of those curious cases of monstrosity, classed under the head of akephalous. The history of the case is, briefly, as follows:

Mrs. G., aged thirty-seven, and mother of three children, has had four miscarriages. She had been under my charge for three months prior to her becoming pregnant, for the treatment of profuse menorrhagia, dependent upon ulceration of os and cervix uteri. Eight months subsequently I was summoned to her bedside, and found her excessively nervous, and complaining of dull, spasmodic pain, simulating labor pains, and of a constant discharge of water from the vagina. Upon examination *per vaginam*, I found the os soft and flabby, but not open larger than a ten-cent piece (if you remember, dear editor, how large these are), but with a dribbling of colored water, without any offensive odor. I ordered her ten grains of bromide of ammonium every four hours, and left her.

Next day, no change. Forty-eight hours after, her pains became more decided, and with shorter intervals, and upon examination the os was found widely open, and a soft, spongy mass pushing its way down through the strait. The labor was protracted; but after eleven hours, the original of the picture accompanying this was ushered into the world — dead. It could not have been dead long, as it presented no sign of putrefaction.

The *basis-cranii* was badly shaped, and the membrane covering it was continuous with the integuments. There was an entire absence of bones at the side and upper part of the cranium, and

a total want of brain or membranes. As can be seen from the picture, the skull runs directly backwards from the superciliary ridge. The specimen was absolutely larger than the natural, full-formed fœtus. There was absence, also, of the spinal marrow. The Berlin theory of Prof. Rudolphi, that which accounts for the akephaloid monster, by its origin in *hydrokephalus*, would seem to be borne out in this case, as it has in many others, viz.: by the great abundance of liquor amnii. In this case there was an uninterrupted flow for over fifty hours. The mother had a speedy and excellent recovery.

The all-absorbing theme in our profession, and indeed among the *laity* recently, has been the question of *female attendance* at *our clinics*. As the matter is still under discussion, I reserve an account of it till my next communication.

ARTICLE II.—*Transfusion of Blood. Report of a Vivisection, Illustrating Lectures on the Blood*, by PROF. FREER, Rush Medical College. Reported by F. L. WADSWORTH, M.D., Chicago, Illinois.

THE following account of a vivisection, performed before the class, at Rush Medical College, on the 10th inst., by Dr. Freer, Professor of Physiology and Microscopic Anatomy, may be of value to your readers.

A dog, the weight of which was fourteen pounds avoirdupois, was anæsthetized, the left carotid artery and jugular veins were exposed, a canula inserted into each, and secured by ligatures. Sufficient time was then allowed for the animal to recover his consciousness from the effects of the anæsthetic, when the stop-cock of the canula inserted into the artery was turned, and the blood allowed to flow until sixteen ounces were extracted and the force of the heart's pulsations so reduced that no more could be drawn from the artery with the animal lying horizontally upon his right side. Respiration now gave evidence of syncope, the limbs were rigid, the jaws set, death was impendent.

Meantime, a portion of the blood drawn had been defibrinated and kept at its normal temperature, by a warm water bath. It was now (twenty minutes from the time it commenced to flow from the artery) passed through the canula, by means of a syringe, into the jugular vein. In this manner seven ounces of defibrinated blood were returned to the system of the animal.

On the introduction of the first ounce there was observed decided evidence of increased vigor. During the injection of the second ounce, by some defect in the apparatus, air was admitted into the vein. Instantly the animal succumbed; a tremor affected his entire system, and respiration ceased. Prof. Freer remarked that the animal's life had been sacrificed by the accident; but by convulsive efforts he regained respiration, and in two or three minutes the effects of the occurrence had disappeared. When the seventh ounce had been introduced there remained little, if any, disturbance of respiration, the heart's vigor was nearly restored, the muscular spasm had subsided, and there was apparently no more disturbance of the system than usually occurs at this period after the administration of chloroform for any ordinary operation.

In eight minutes after the blood had been returned the animal raised his head and observed intelligently; and twelve minutes thereafter he voluntarily raised himself and walked across the room, some twelve or fifteen feet. The day following he was sprightly and playful, and the second day after the operation he traveled nearly a quarter of a mile without any evidence of fatigue whatever.

This *vivisection* occurred during the delivery of a lecture on the blood, by Prof. Freer, and was introduced to illustrate the function of the red blood corpuscles in their immediate relations to respiration and the maintenance of vitality, and to demonstrate the fact that fibrin takes no immediate part in restoration from exhaustive hæmorrhage, serum serving as the vehicle of the vitalizing corpuscle, and that transfusion with defibrinated blood may be performed somewhat leisurely and with impunity, care being taken that the instruments used are nicely adapted for the exclusion of air from the vessels.

ARTICLE III. — *Congenital Fibro-cellular Tumor.* By MOSES GUNN, M.D., Chicago, Ill.

THE above wood cut is from a photograph, and represents correctly the appearance of the tumor. The little patient was fifteen months old and of healthy appearance, but was unable to raise the, to him, ponderous leg. At birth, a tumor surrounded the leg completely, about midway between the knee and ankle joints. This is the testimony of the mother and an aunt of the child.

At the age of three months Prof. Freer saw the case, and describes the tumor as being about half its present size. Now the disease extends from above the knee to the foot, which it overlaps nearly to the toes, and measures, at its largest part, twenty and one-half inches. The skin is smooth, attenuated and pliable. The mass is elastic without fluctuation; but the elasticity varies at different points, being in some places firm and hard. Exploration gave vent to serum, which continued to flow for an hour. A small trocar yielded the same discharge, but no more freely than did the needle.

Diagnosis. — Hypertrophy of areolar tissue, with secretory endowment of the walls of the areolar spaces.

The disease was extending rapidly, and amputation was decided upon, and performed on the 6th of March last. Ether was administered, and the operation hardly produced a perceptible shock. The wound healed by granulation, mainly.

A section of the tumor showed the disease to be confined to the superficial fascia, the deep fascia and integument being normal.

The microscopic character of the tissue conformed to Paget's description of fibro-cellular growths.

ARTICLE IV. — *Alarming Dental Hæmorrhage.* By N. H. CHURCH, M.D., Patoka, Ind.

UNDER the above caption Dr. A. I. Edison, Colchester, Illinois (*Am. Jour. Dent. Sciences*, Aug., 1869), details a case of alarming hæmorrhage from the extraction of middle and posterior molars of Inf. Max., right side. Hæmorrhage lasted in the neighborhood of twenty-four hours before it was arrested.

Sunday, September 26, was called upon to visit Mrs. Mc——, who was suffering from odontalgia of bicuspid tooth of Sup. Max., left side. I extracted tooth. Hæmorrhage, at the time, was no more than usual.

October 2, P.M., was called upon by Mrs. Mc——, who was "alarmed about the bleeding tooth." I ascertained that hæmorrhage had been going on, unabated, since the extraction of the tooth. I placed a powder of tannic acid and gum catechu—equal parts—in the bleeding cavity. Kept *in situ* with compress of cotton saturated in muriatic tincture of iron.

Patient went home, and I heard no more from her until Sunday, October 3, A.M., when I was summoned to put in an appearance at her residence at once, and, if possible, arrest the hæmorrhage, as it was quite profuse. I carried with me a small phial of Monsel's solution of the per-sulphate of iron.

Arrived at the house, found patient very much exhausted. Learned that hæmorrhage had been greater during the night previous than it had through the whole week past. After having applied a few compresses of cotton saturated in the Monsel's solution—the last one being held *in situ* with the finger for the space of half an hour—the hæmorrhage had entirely ceased.

I dare not express myself as to the amount of blood lost in this case, lest the readers of this article think me rather too hæmorrhagic.

The patient came up to her usual standard of health, in a few days, without after-treatment.

ARTICLE V.— *Reversio.* By J. E. O'B., M.D.

YEARLY zealous crusaders swoop down upon imaginary heathen to conquer for the public the holy sepulchre of medical truth.

This is a matter of known rejoicing to the storied Scovenduyck. You say to Smythje that Mrs. S. has puerperal fever; you explain the pathology of that to him in terms suited to his comprehension, and you give an outline of physiological treatment. There now flits through the sober imagination of Smythje a notion that lecturing is incompatible with action; and, *prestissimo!* you are changed for the other man.

According to Scovenduyck, Mrs. Smythje is affected with a febrifuge. The pineal gland is said by him to be in a state of morbid conjunction with the peritoneum ducts; but Smythje is informed that after the abstraction of a few gallons of blood, the application of blisters to the ears, and a few leeches to the eyelids, recovery will be certain.

Now be it observed that you have done no worse, or but little worse, than Scovenduyck in the didactic direction; but Smythje having discharged you, is mollified by Scove., who prepares the family physic for evermore. This is a matter of sublime indifference to you, to whom money is no object; but consider the disastrous consequences that may result to the Smithii. There seems to be some unnatural perverseness about sick people, which causes them to prefer of all things to have their food and medicine placed within their reach, and as little said about it as possible. They seem to imagine that their brains are not in a condition to appreciate the sublime truths with which you favor them, and they turn wearily from your syllogisms to the ministrations of the man whom experience has taught the use of those weapons whose names alone you know — to the man who is judged by the universal criterion — success.

ARTICLE VI. — *Sub-involution, with Retro-flexion.* By F. B. NORCOM, M.D., Chicago.

ON 2nd January, the present year, Mrs. L——, æt. 33, a multipara, of leuco-phlegmatic temperament, came from the country and was placed under my charge, suffering from severe uterine disease of four years' standing. She had borne two children, besides having had two miscarriages, but dated her present ailment from the birth of her last child, now about four years of

age. Without ever enjoying robust health, she had been always comparatively well, with normal menstruation, up to the last confinement, when, rising too early — within the first week — she began to experience pelvic pains, and leucorrhœal discharge; and, six weeks afterwards, was thrown from her carriage.

From this period she dates the aggravation of her symptoms; the pain in back, pelvis and lower abdomen, with discharge increasing, and gradually growing worse, attended by irritable bladder, more or less weight in uterine region, and depreciation of general health.

Upon visiting her, she presented a very pallid and bloodless appearance, with pinched, anxious expression; considerable emaciation; great despondency; and fear of premature death. Pulse 96, weak and irritable; tongue anæmic, and coated; bowels capricious; loss of appetite, with attendant dyspepsia (deficient gastric innervation); irregular sleep; and persistent pains in loins, pelvis, and inner thighs. The menstrual flow excessive and painful.

An examination by vagina and rectum revealed a well-marked case of retro-flexion, with moderate thickening, and acute tenderness of uterine walls, especially the posterior, which was slightly mammilated, while movement of the neck forward induced pain at the internal os. The speculum showed the canal open, and filled with tenacious mucus, neck and lips enlarged; and the sound passed in four inches without much difficulty, some degree of pain, with its convexity looking upwards, giving evidence of tenderness upon impinging upon fundus, followed by few drops of blood upon its withdrawal.

The rational and physical signs in the case rendered the diagnosis comparatively easy: sub-involution, from the early rising after delivery, and uterine atony; retro-flexion from shock, the predisposition from increased uterine weight; and concomitant sub-acute endo-metritis, with moderate degree of parenchymatous inflammation. The case was rather unpromising as to a radical cure, the more especially as the nervous system was completely shattered — a strong hysterical element predominating; the digestion much impaired; and the *morale* of the patient decidedly bad. She was very desirous of returning home, and was untiring in her persuasions to hasten the treatment.

I began by using the sponge tents, partly to secure readier access to uterine cavity, and partly for their local depletory effect; and after introducing some four or five, at intervals of few days, had well dilated the neck, and reduced the thickened condition of the walls. I now began passing, *in utero*, small suppositories of wax and cocoa butter, with morphine and iodine once a week, allowing them to remain, while I filled the *cul-de-sac* of Douglas, and enveloped the neck with iodized cotton, well rubbed in glycerine. At the same time the bowels were regulated by the "white mixture," *pro rê nata;* iron and bismuth administered; a highly nutritious diet, with wine; properly regulated exercise, on foot and in carriage; well ventilated apartments; moral suasion, etc., etc. This treatment was pursued steadily, with now and then some few alterations, and indorsed by Dr. H. W. Jones, who saw the patient several times with me, until we had reached that stage when considerable diminution of the uterine hypertrophy had taken place, and very great subsidance of pelvic and uterine tenderness. In the mean time the appetite had materially improved, the sleep undisturbed and refreshing; the anæmia much lessened, the function of hæmatosis being in better operation.

On the 15th of February the closed lever bar pessary of Hodge was introduced, placing the womb *in sitû*, with very little pain or discomfort. The cotton rubbed in glycerine wrapped around cervix and filled in behind; and in case of irritation, suppositories containing atropine and morphine, as suggested by Dr. H. W. Jones. The pessary was left in for five or six days, when she complained of so much pressure upon neck and base of bladder that I removed it; and being warmed, its anterior bar was indented and lowered in such a manner as to interfere in no wise with this important viscus. It now remained in two weeks, when, having fallen somewhat from its position, it was again removed and slightly widened, so as to further distend the vagina, and then remained to her departure from the city, March 10th. The day she left, I made a thorough examination of the parts, and found every thing in a very satisfactory condition for the time she had been under treatment; little tenderness upon palpation or movement; the thickened condition still further reduced; the sound giving no great pain; and her general health and spirits much improved.

I endeavored to impress upon her the importance of adhering to this course of treatment, and requested her to allow the pessary to remain, even should a year or more require it, until the womb had regained its normal relations, and retired properly in the pelvis.

She was informed that her period of invalidism would continue a year or so, and that she could expect no other certain or permanent relief. After her departure, I received several encouraging letters; but later, I lost all knowledge of her, and only heard within a month, that having fallen back somewhat — probably due to some neglect of the laws laid down for her guidance — she had become alarmed, and placed herself in the hands of a "magnetizer," who had removed the support, and promised to cure her by the *battery*.

ARTICLE VII. — *Corporeal Metritis, with Abscess of Broad Ligament.* By F. B. NORCOM, M.D., Chicago, Ill.

MRS. M——, æt. 29, scrofulous and nervous temperament, came to see me March 30, 1869, having been under a physician's care last two weeks, from some obscure uterine disorder. She was the mother of one living child, but had suffered several years back from two or three abortions — whether due to outside interference I could not discover — and seemed never to have recovered entirely from these shocks to her system. She has been always troubled by the "whites," more or less, even before marriage, and her pelvic organs appeared to exhibit defective organization, from the fact that her menstrual flow was often irregular and painful, and she was subject to frequent pains in the lumbar and hypogastric regions. Previous to this visit, one year ago, I had prescribed for a severe menorrhagic attack, without, however, being allowed an examination, and at that time suspected some womb disease.

She is now very pale and anxious looking, with slight hectic flush; tongue coated thick; pulse 110, small and irritable; bowels very constipated; anæmia, and irregular sleep. She states that, about two weeks back, was taken with excessive and painful uterine hæmorrhage, accompanied by severe pain in small of

back, above pubis, and inner thigh, followed in a few days by fever, a dull, deep-seated, dragging sensation in hollow of sacrum, frequent micturition, great feeling of prostration, swollen abdomen, excessively tender over region of womb, etc. She had literally crawled into the office, where, upon stating these facts, an examination was immediately made, and detected cervical lips soft and ragged; os open, so that forefinger could be easily passed to first joint; great tenderness of the body upon bimanual manipulation, somewhat thickened besides. The adjoining tissues were so hard and sensitive that I was inclined to believe in pelvic cellulitis accompanying this uterine trouble, but later developments showed simply womb and ligament principally involved. The sound entered freely some three inches, creating much distress upon being moved in uterine cavity; while viewed through the speculum the os looked red and mottled, its edges somewhat torn and abraded, and considerable mucus with few drops of blood exuded.

The diagnosis: abortion *within* third month, by instrumental interference, and doing sufficient damage to create a marked degree of corporeal metritis. She was ordered to go home and get into bed, and the bowels to be opened by warm enemata, opium freely administered; emollient vaginal injections; hop poultices; unirritating liquid diet; and absolute rest in horizontal posture. The second day, complaining of a constantly increasing dull pain in left iliac region, I made a careful examination, and detected a tumor, size of a hazel-nut, a little to left of womb, movable, tender, and hard as a marble. There was now a new and dangerous complication introduced, and little expectation of cure, or even relief, until the abscess should mature, and open into some natural passage, or externally, the latter rather improbable. As the pain and other physical symptoms increased daily *pari passu* with enlargement of the tumor, and my patient seemed very ill and alarmed. I called in Dr. H. W. Jones, who confirmed the view I took, and indorsed the remedial measures employed. Two days later, the abscess had reached the size of an ordinary walnut, very plain upon palpation, tender, throbbing, very hard and movable, and accompanied by pyogenic fever, with total loss of appetite, unrefreshing sleep, and much nervous and irritative debility.

The friends, fearing a fatal issue, begged another consultation, and Prof. J. A. Allen saw the case, recognized the pathological condition, and upheld the expectant and palliative treatment.

The third day after this consultation, the abscess not yet breaking, she lost her confidence in my management, called in another physician, who assured her that there were three tumors, and that her former physicians should not have allowed her to get into such a dilemma. My successor, however, arrived just in time to witness the evacuation of the abscess through the large bowel, and a rapid subsidence of the painful symptoms. She now began to convalesce, and ten days afterwards, though not restored to her wonted health—for she still suffered from some uterine inflammation—she was about, attending her domestic duties, cursing all doctors, but he who had cured by the "laying on of hands," and consigning us to places too hot to be mentioned to ears polite. *Sic transit gloria medici.*

I will mention here, *en passant*, that she never acknowledged to any of us that she had had this abortion, and always denied her having been in a pregnant condition.

ARTICLE VIII. — *Cervical and Corporeal Endo-Metritis, with Retro-flexion.* By F. B. NORCOM, M.D., Chicago, Ill.

ON 25th of January of this year I was summoned to visit a young lady, aged 19 years, of nervous temperament, who had been suffering the last 18 months from profuse and painful menstruation and general bad health. Her monthly periods began about her sixteenth year, were always regular and painless, and her condition that of excellent health, up to one year and a half ago, when she suffered from an attack of amenorrhœa, which continued three months, to be followed by a severe uterine hæmorrhage, attended by pains in loins, pelvis, and lower abdomen, with expulsion of large clots of blood. Two months afterwards she accidentally fell down a stairway, bruised herself, and ever since her courses have been dysmenorrhœal, at times very profuse, and accompanied and followed by pelvic, abdominal, and lumbar pains. During the intervals slight leucorrhœa, a

feeling of fulness in uterine region, pretty constant — but not severe — pains, and gradual failing of her ordinary health.

Miss K —— presented at first sight, a pale, rather haggard expression, highly strong nervous tendency, coated tongue, and weak, irritable pulse, about 90. She suffered much from gastric distress and fullness, especially after meals, having little or no appetite, and was much troubled with broken sleep and frightful dreams. She complained of great weakness, and such pain in her back that, she could in no wise attend her household duties. And although she had submitted to constant medical treatment, both local and general, she felt no better, and had fallen into despondency and disgust.

An examination by the *toucher* revealed a thickened cervix, with open os, retroflexion and much tenderness with some hypertrophy of body of uterus. The sound passed readily in the reverse position, at least three inches, giving acute pain upon movement in the uterine cavity, and by turning easily replacing the womb in its natural position, but which as readily returned, very much to her immediate relief. The os tincæ upon view appeared red and swollen, the canal well opened, its membrane slightly everted and granular, while a clear, glossy mucus exuded, and fell into the vaginal canal.

My opinion was, that there had been abortion, followed by its very ordinary subsequences, inflammation of membrane of neck and cavity, subsequently, of the body, and displacement from accident. Scarifications and warm vaginal douches were resorted to, while the bowels were kept soluble by alkaline cathartics, and vegetable tonics and bismuth, with very slight percentage of morphine for dyspeptic symptoms. About one week after this initiatory treatment the ordinary sponge tent was introduced late in the afternoon, and renewed next morning, when by proper manipulation the cervical canal was exposed to view, and presented the condition of granular inflammation so common to its lining membrane. An application of chromic acid — ʒ j to ʒ ij — was then made, the neck painted over with Churchill's strong tincture of iodine, and the posterior *cul-de-sac* well filled with iodized cotton moistened in glycerine. The tent was used once a week, always followed by the chromic acid solution, and in the interval reposition was daily effected, cold and warm injections

assiduously applied, hip bathing, proper decubitus in bed, liberal diet, regulated exercise, etc., etc.

About the middle of March, the tents having been discontinued several weeks, there was such amelioration of the inflammatory symptoms, such as pain, tenderness, weight, etc., that I inserted, in order to facilitate the cure, the closed bar pessary, and the womb immediately took position in its natural bed. This support remained in until the latter part of April, when she complained of its giving rise to pain in left side of vagina, and producing irritation of neck of bladder. It was removed, warmed over a spirit lamp and properly moulded, by slightly curving the left lateral bar, bringing forward its posterior support, and indenting and lowering its anterior bar, so that when again replaced, it seemed to fit, or be exactly adapted to the condition of the parts, and was worn until August, when I considered the cure as complete, and removed it to find the uterus in its normal position well retained in the pelvis. Her appetite had now returned, her sleep refreshing, all pain, of whatever character, gone, her spirits and buoyancy of disposition regained. Her menstruation had been gradually assuming its natural condition, both as regards quantity and quality, and at date of the removal of support was perfect.

In this case reposition could have been effected without the pessary, but it would have taken probably more time, and it was used simply to facilitate a cure, not *ex necessitate rei.*

ARTICLE IX.—*A Case of Placenta Prævia.* By J. P. HAMILTON, M.D., Darlington, Wisconsin.

THE following case may be of interest to your readers. It was one of great interest to me, it being the first of the kind that has occurred in my practice, extending over twenty-eight years.

On the sixth day of August last I was called to see a Mrs. G., of this village, a very intelligent lady, pregnant with her seventh child, and a week or ten days over eight months advanced. She informed me that about four o'clock that morning she was

attacked with uterine hæmorrhage, and that it had continued, though slightly, up to the time of my visit, which was about seven, A.M. The hæmorrhage came on, according to her statement, without any known cause or pain, and with a gush. With this statement, I did not at once suspect the kind of case I had to treat. I had attended Mrs. G. in her two previous confinements, in both of which there were no untoward symptoms. I recommended her to keep quiet, and left her four powders, containing acet., plumb. and pulv. opii, to be taken every hour till the hæmorrhage was controlled. The case went on to the tenth. About the same time in the morning I was called. I found the flooding had returned. The nurse informed me that she had given her but two of the powders I had left at my previous visit; that the flooding had ceased after giving the two, and Mrs. G. had been quite comfortable till four o'clock this morning. I recommended her to take the balance of the powders, and quietness. I heard nothing further from the case till the fifteenth. At seven, A.M. I was called in haste; found my patient flooding alarmingly; her face blanched, pulse weak and fluttering. Her husband (who is a very intelligent gentleman) stated she had lost considerable blood, and appeared very much alarmed. I immediately made a vaginal examination; found the os fully dilated, and, on further examination, I found I had a case of placenta prævia, the centre of the placenta placed over the os, and the patient's life ebbing out every moment. Whatever I was to do to save my patient must be done immediately. Having a phial of chloroform in my pocket, I poured a small quantity on a handkerchief, handed it to her husband, requested him to apply it to her mouth and nose, and without changing her position, I introduced my hand into the mouth of the uterus, perforated the centre of the placenta and membranes, carried my hand up to the presenting part of the child (which was the head), pushed up my hand till I found a foot, which I brought down, and delivered the child as far as the umbilicus. The hæmorrhage having ceased at this stage of the delivery, I waited till the uterus had pretty firmly contracted. I delivered the balance of the child without very much loss of blood. The child was a female, of small size, and still-born; but a very little effort sufficed to resuscitate it. The placenta came away in a short time. By

administering stimulants I had the satisfaction to see my patient rally, and had as good recovery (excepting debility from the loss of blood) as after any of her previous confinements.

Now, Mr. Editor, I don't claim that there is any thing unusual in the management of the above case, but one thing, and that is the perforation of the placenta, and extracting the child through the rent of the same. All the standard works that I have examined are opposed to that, as far as I have investigated the subject. They direct the student to detach the edge of the placenta and rupture the membranes and version. I am satisfied, had I followed this instruction, I should have lost valuable time and my patient; for time was a very important consideration, as far as my case was concerned. Prof. Dewees is considered very good authority in such matters. He gives eight reasons why it should not be done. As far as one case goes, it proves the utter fallacy of his reasoning. My hand passed through the placenta, using but very little force, and the child passed through the rent made by the hand without any difficulty.

I am satisfied that I succeeded in delivering my patient in a much shorter time than by any other course I could have adopted, and that, in my case, as I have stated, was a *desideratum*.

Should I ever have a similar case, I should treat it as I have this, believing it to be safer to mother and child, by being sooner performed.

ARTICLE X.—*Memoranda of an Obstetrical Case.* By J. W. BROOKS, M.D., Chicago.

PERHAPS the following memoranda of an obstetrical case may not be uninteresting to the medical reader:

Was requested to visit Mrs. ——, of —— avenue, at one o'clock, A.M., October 24, 1869. Found slight labor pains in progress, at the full period of second pregnancy. Tactile examination discovered the head low in the pelvis, and no dilatation of the os uteri. Both lady and nurse assured me that no liquor amnii had passed off. Matters remained in *statu quo* until six and a half, A.M., when the pains abruptly quickened, and the os began to dilate. An examination now disclosed a mento poste-

rior presentation, the anterior fontanelle being under the arch of the pubis. (The case is well illustrated in Smellie's 26th anatomical plate.) The frontal bones lapped at each recurring pain, and it being evident that the posterior portion of the cranium was above the arch of the pubis, and no progress being made in the labor, therefore, in the absence of a uterine contraction, I made an effort to change the presenting position, as follows: With two fingers of the right hand introduced, a trial was made to push the child back in order to change the direction and position of the head. The third was successful, and as the whole child receded, there was a simultaneous receding of the chin and a corresponding advance of the occiput, with partial rotation of the head, which brought it into the first natural position of Rigby, it being evidently the result of the effort to change the presentation. From this time the labor progressed naturally, and in one hour she was delivered of a fine, healthy girl, which occurred at eight fifteen, A.M. The secundines were delivered in twenty minutes. During the delivery of them something was found attached to the outside of the membranes, and also to the uterus, which was separated from the latter with the finger, and left on the former. A little, brisk hæmorrhage followed the detachment, which soon ceased. A critical examination of this body proved it to be a small liver. The uterus contracted firmly, but seemed larger than normal. I waited about two hours, and was on the point of leaving, when very moderate hæmorrhage commenced, and with each after-pain increased materially. Neither the application of cold, or the use of ergot, checked it. It increasing with great rapidity, I took one ounce of strong solution of perchloride of iron, and four ounces of tepid water, and filled a small gutta-percha syringe with the mixture, and fitted it to a male gum catheter, size twelve, with single eye, and prepared to introduce the catheter into the uterus to inject the fluid therein. Within the os a firm, resisting body was encountered. On opening the os the hæmorrhage was fearful. I proceeded to push the index finger onward, carrying the catheter with it. When the obstruction gave way the catheter was carried in and the whole fluid injected, which temporarily allayed the hæmorrhage. Finding something attached to the posterior part of the uterus that could be separated, proceeded at once to detach and remove

it, which was successfully accomplished, but the hæmorrhage returned violently, and another injection of like kind, strength and quantity, was used, which checked the flooding. The offending cause proved to be another set of membranes, attached by a large surface; and between them and the walls of the uterus were evidently the remains of a blighted ovum. The head, heart and kidneys could be made out, and a good deal of shapeless muscular tissue, together with some points of ossification in this tissue. The placenta, etc., can still be seen. From this time no untoward event occurred, and Mrs. —— has made a good recovery.

When anxiety was at its height, it was announced by one who knew, that a certain Homœopathic professor had administered a little powder to remove what was believed to be a recent conception, at the same time saying that if it did not remove the thing it would do no harm. The remark was also made that she was somewhat unwell, for a day or two; that is, had some show, but went on with her pregnancy.

Query: Did the little powder have the effect to partially separate and blight one ovum, the conception having been twins?

ARTICLE XI. — *Poisoning by Opium.* By J. E. O'BRIEN, M.D., Phillipsburg, N. J.

APPROPOS of opium and belladonna, I would offer the following case:

Emmy C., aged 2 years, found and swallowed thirteen pills of gum opium which had been prepared for the use of a neighboring opium eater's child. Each pill contained about one quarter of a grain.

Saw the little patient ten hours afterward. She was in stupor, respiration feeble and irregular, pulse slow and full, twitching of the tendons, pupils contracted to a point, tongue swollen and thrust between the lips, and trembling.

Obtained emesis by sulphate of zinc and ipecac. Used sinapisms to feet and gave coffee to drink.

In two hours no improvement. No irritant effect from the mustard. Gave a quarter grain ext. belladonna. In twenty

minutes, respiration, from being almost gasping, became free and regular. Gave another quarter grain in half an hour, which was followed in an hour by the little girl getting up and asking for bread. She remained awake half an hour talking to her mother, then slept naturally until morning, when she appeared perfectly bright and fresh, and without debility.

Theory.—The opium had induced congestion of the nerve centres. The belladonna stimulated tissue change in them, by which the extra material was taken up and the capillaries relieved.

The opium eatress wishes to reform. Shall try the K. Br. brought for her to step down upon. Her children, she says, cry for their narcotic as soon as born. She weans them at about five years of age.

Hospital Reports.

ARTICLE I.—*St. Luke's Hospital.* Under the care of Dr. JNO. E. OWENS.

TWO CASES OF TÆNIA SOLIUM.—*Case* 1: J. C.; aged 48. Came under treatment January 1, 1869. Eighteen years ago had, for the first time, observed in the fæces segments of tænia solium. The patient's digestive organs are in good condition. Six years ago he took turpentine emulsion, which caused the expulsion, according to his own statement, of thirty feet of the worm. He informs us that he "pulled and picked his nose a great deal;" that he has suffered more or less from pain in the bowels; that his appetite is good, and sometimes craving for every meal; that he often craves food between meals. Turpentine emulsion was administered; but, occasioning considerable distress in the stomach and bowels, it was discontinued. Segments are frequently voided, and from time to time pieces of variable length. Oil of male fern was substituted for the emulsion, as follows:

January 23, at 9 P.M., Oil of Male Fern, - - - gtt. xxv
" 24, at 7 A.M., " " - - - - gtt. xxv
" 24, at 8 " Castor Oil, - - - - ℥j
" 24, at 11 " Evacuation, but no traces of worm.
" 24, at 9 P.M., Oil Male Fern, - - - - gtt. xxv
" 25, at 7 A.M., " " - - - - gtt. xxv
" 25, at 8 " Castor Oil, - - - - - ℥jss
" 25, at 9 " Copious evacuations, containing 9 feet of worm.
" 25, at 3 P.M., " " " 1 ft. in segments.
" 25, at 9 " Oil Male Fern, - - - - gtt. xxv
" 26, at 7 A.M., " " - - - gtt. xxv
" 26, at 8 " Castor Oil, - - - - ℥jss
" 26, at 12 M., Copious evacuations, without any more pieces.

One piece had a threadlike extremity. Dr. Hunt was good enough to examine the pieces for me, but the head was not discovered. The patient was in the habit of eating uncooked pork.

Case 2.—Mr. R; æt. 35; native of Ireland. Under treatment for anal fistule. One year ago, last June, he noticed, for the first time, segments of tænia solium in his evacuations. Similar segments have been voided every day or two up to this date. For the last five years he has eaten very frequently of uncooked beef.

To-day, April 19, after having been ordered to abstain from the eating both of breakfast and dinner, the following treatment was instituted; At 10 A.M., pumpkin seed emulsion (pumpkin seed, ℥ij; water, ℥viij; sugar, a sufficient quantity); at 12 M., castor oil, ℥j. The bowels moved freely at 6½ and 7 P.M., and at 8¼ P.M. No segments were observed. At 9.30 he had another evacuation, containing three distinct worms (tænia solium?), amounting, in the aggregate, to thirty feet. One end of each tapered to a threadlike extremity. We felt certain of finding one or more heads. Our hopes, however, were not realized, even after a careful examination. The passage of the head of the tænia solium must surely be rather a rare occurrence. We have examined eight specimens, and in no case has the head been discovered. It is likewise rare to find more than one worm. In the last case three existed. Our experience inclines us to the opinion that the treatment by pumpkin seeds is superior to that by turpentine or the oil of male fern.

112 Randolph St., *Dec.* 8, 1869.

Editor's Book Table.

[Note.—All works reviewed in the columns of the Chicago Medical Journal may be found in the extensive stock of W. B. Keen & Cooke, whose catalogue of medical books will be sent to any address upon request.]

A Treatise on Intraocular Tumors. From Original Clinical Observations and Anatomical Investigations. With one Chromo-Lithographic and Fifteen Lithographic Plates, containing very many Figures. By H. Knapp, M.D., late Professor of Ophthalmology, and Surgeon to the Ophthalmic Hospital in Heidelberg. Translated by S. Cole, M.D., of Chicago: New York: William Wood & Co., 61 Walker Street. 1869. Pp. 323.

The translator of this essay will be recognized by readers of the Journal as the author of several very interesting letters for its pages, during his residence in Europe, and while in attendance upon Dr. Knapp's clinical and didactic course at Heidelberg. As his attendant, Dr. Cole saw most of Dr. K.'s anatomical preparations, and observed some of the cases described during life. He is, therefore, as Dr. K. remarks in the preface to the English edition, thoroughly conversant with the subject; a circumstance no less indispensable for a good translator than a perfect knowledge of both languages.

In his pathology, the author adopts mainly the views of Virchow in his work on Morbid Tumors, but observes: "If I was to rely upon the results obtained from my own observation, ocular tumors would hardly admit of more than two varieties, viz.: "*Glioma*, originating in the *retina;* and *sarcoma*, proceeding from the choroid, and being in part *unpigmented* and in part *melanotic*."

The descriptions, both general and particular, are very clear and explicit, and constitute a valuable contribution to ophthalmology.

The plates are beautifully executed, and the explanations very full and complete. We congratulate the author on the excellence of the translation, and general typographical appearance of

the book. The ophthalmologists, just now, seem to be outstripping all other specialists in the production of new and elegant volumes.

Diseases and Injuries of the Eye; their Medical and Surgical Treatment. By GEORGE LAWSON, F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and Assistant Surgeon to the Middlesex Hospital. Philadelphia: Lindsay & Blakiston. 1869. Pp. 436.

THIS book is an entirely distinct one from the treatise on "Injuries of the Eye, Orbit and Eyelids," by the same author, an edition of which was published by Mr. H. C. Lea in 1867. Those who are familiar with that work, will be prepared to receive the present one with pleasure. It is not intended to take the place of the more voluminous treatises on the eye, but to afford the practitioner a concise account of modern ophthalmological science. It has evidently been carefully written, and in addition to the writer's own experience, gives frequent reference to the practice of his colleagues at the Royal London Ophthalmic Hospital, and the labors of the continental ophthalmic surgeons.

A formulary of prescriptions, a page of test-types (Dr. Pray's), and a copious index add materially to the value of the book.

A Compend of Materia Medica and Therapeutics, for the use of Students. By JOHN C. RILEY, A.M., M.D., Professor of Materia Medica and Therapeutics in the National Medical College; one of the Physicians of Providence Hospital, Washington, D. C., etc., etc. Philadelphia: J. B. Lippincott & Co. 1869. Pp. 370.

A "comprehensive syllabus," with outline descriptions, adopting the classifications usually employed in the lecture-room, and the formularies, physical histories, etc., given in the dispensatories and larger systematic works. From the casual examination we have had time to give it, we judge it a convenient and reliable manual.

Percussion and Auscultation as Diagnostic Aids. A Manual for Students and Practitioners of Medicine. By Dr. Carl Hoppe, Assistant Physician to the Sixth Westphalian Regiment of Infantry. Translated by L. C. Lane, M.D. Philadelphia: J. B. Lippincott & Co., 1869. Pp. 152.

The author herein seeks to give in a condensed form the views of Scoda, Piorry, Traubé, Wintrich and Bamberger. Especial attention is given to the views of Traube. Although claiming to be nothing more than a compend, we fully coincide with the translator's remark, that "it contains far more than many of the large works on the same subject — being, in fact, a master piece, both in thoroughness and brevity."

Those who may already have the capital epitome by Barth and Rogers, Loomis, Flint and others, will nevertheless do well to add this to their libraries. The chapter on the Apex-Impulse (appendix) is alone worth the price of the book. It is the only satisfactory *resume* of the topic it has been our fortune to meet.

Reports of the Illinois State Hospital for the Insane. 1847 to 1862. Pp. 422.

We have also to acknowledge herewith several pamphlets (elsewhere noticed) from A. McFarland, M.D., Superintendent.

A Physician's Problems. By Charles Elam, M.D., M.R.C.P. Boston: Fields, Osgood & Co., 1869. Pp. 400.

It is with a sense of unmingled pleasure that, for once, we can chronicle the appearance of a book suitable for popular reading, at least of educated and thinking men. Dr. Elam has collected herein many topics of surpassing interest, and, in the main, has elucidated them in a manner which must command attention and inspire healthful thought.

Although intended for general perusal, we sincerely hope that among his readers the author may secure that large class of physicians, we are happy to believe daily increasing in numbers, who rise above the bald routine of professional practice to a philosophic consideration and study of the grand first principles and large comprehensive truths which entitle Medicine to be ranked, not only as the most useful of arts but as the noblest of sciences.

The "problems" discussed are eight in number, and we regret that we can spare but little space for quotations or even abstracts.

The first problem is that of *Natural Heritage*, and in the exceedingly able and interesting chapter unfolding his views and the facts upon which they rest, he concludes:

1. In procreation, as in creation, we every where trace the operation of two principles, Similarity and Diversity.

2. In obedience to the law of similarity, 'like produces like,' equally in species, in races, and in families.

3. In obedience to the law of diversity, children differ from their parents and from each other. In accordance, also, with this law, there is the power of returning to the specific type, whatever may have been the modifications produced accidentally, or by the influence of circumstances, upon the race; even as, according to Mr. Darwin, the different varieties of pigeon evince a tendency to return to the 'blue rock' type.

4. We have seen reason to conclude that these two laws are not so much opposed as their names would appear to imply; but that diversity is produced by the very potency of operation of the law of similarity, whereby temporary and accidental conditions are propagated.

5. Every formation of body, internal or external; every deformity or deficiency, from disease or accident; every habit and every aptitude — all these are liable to be, or *may* be, transmitted to the offspring. In the case of accidental defects and modifications of the specific type, the offspring *usually* do not inherit them, but return to the normal type.

6. Intellectual endowments and aptitudes are liable to transmission; and according to the mental cultivation or neglect of the parents will be (as a general rule) the capacity and facility of learning of the children. This will be more evident in proportion to the number of generations through which such cultivation or neglect has been practiced.

7. All moral qualities are transmissible from parent to child, with this important addition, that, in the case of vicious tendencies or habits, the simple practice of the parent becomes the passion, the mania, the all but irresistible impulse of the child.

8. Even where the very identical vice is not inherited, a morbid organization is the result, which shows itself in some allied morbid tendency or some serious physical lesion.

9. All chronic diseases appear to be transmissible, either in the original form, or in the form of a transformation of the morbid tendency.

10. These inheritances, normal or abnormal, are not always immediate from the parents, or even in a direct line; but they miss one or more generations, and sometimes have only appeared in collateral branches, as an uncle or grand uncle, etc. The reason for this may be deduced from what has been stated above. A man, for instance, does not inherit

all the qualities of his father or mother; and of those which he does inherit, only some are developed, whilst others remain latent, and are probably developed in a brother or sister. But his son may in turn inherit the same faculties, with this difference, that those which were but latent or potential in the father are fully manifested in him; and so he comes to resemble not his own father (or mother) so much as his uncle or aunt, or some more distant relative, still descended from one common stock.

11. Of all morbid heritages, unsoundness of mind in its numerous forms seems to be the most certain and constant; and the results form a considerable proportion of our criminal population.

12. But whilst by the law of Similarity children become subject to the imperfections of their parents, by the law of Diversity they are enabled to escape from them; these evils are not necessarily entailed, and a proper comprehension of the principles upon which these diversities depend, enables us to take such measures as will facilitate this escape. And whilst on the one hand we see unhealthy children proceeding from healthy parents, on the other we see the morbid tendencies of the parents counteracting each other, and giving rise to a healthy offspring.

13. The offspring of that large portion of our population who are given up to intemperance and other forms of vice inherited from their parents' strong impulse and feeble wills, so as to become more or less irresponsible, bear a peculiar relation to the law — a relation which urgently claims an attention and investigation which it has, as yet, very imperfectly received.

14. It is highly improbable, and perhaps undesirable, that matrimonial unions should ever be formed on the scientific principle which would lead to the fulfillment of the possibilities hinted at in the foregoing observations; yet a due consideration of such principles may be serviceable in avoiding glaring and palpable evils, if not in producing the actual benefit which *might* accrue under other arrangements.

The second problem is: *How are our armies of Crime and Disease recruited?* and treated under the head of Degenerations in Man.

Each race of men look back to the type of perfection, the original man, as a countryman of their own, and in fact we have no absolute standard of comparison. The author does not believe in the Development doctrine in any wise.

"Even had we no revelation, the hypothesis of a fall from a previous higher state, through the action of various climatic and moral agencies, would present infinitely fewer difficulties in accounting for the phenomena than this absurd theory."

The mode in which the *varieties of mankind* both physical

and moral are produced, is gathered from the considerations set forth in the chapter on Natural Heritage.

Natural modifications of the primitive type occur from ordinary climatic and other terrestrial agencies. Morbid deviations from this type may occur from varying circumstances attendant upon his nutrition, his social condition, his habits of life, hereditary influences, etc. This constitutes a *degeneration*, and is characterized by a tendency to further deterioration, to hereditary transmission, and to the more or less speedy extinction of that section of the race or community. Mental alienation (*moral*) in its various forms, but especially the chronic, is but the concentrated and final expression of degeneracy of race, wheresoever the chain of morbid phenomena commenced.

"Observation shows that, failing certain exceptional elements of regeneration, the offspring of degenerate beings present types of *progressive* degradation. This progression may attain such limits that humanity is only preserved by the *very excess of the evil*, and the reason is plain: the existence of degenerate beings is necessarily bounded, and it is not even necessary that they should reach the *last degree* of degeneracy in order to be smitten by sterility, and become incapable of transmitting the type of their degradation."

Acclimation in individuals may not pass the boundary of natural modification, yet often produces actual degeneration.

"Between the intellectual state of the most savage Bosjesman and that of the most refined European, there is much less difference than between the state of the said European and that of the *degenerate* being whose intellectual arrest is due to cerebralatrophy, congenital or acquired, or to any morbid influence leading to imbecility, idiocy, or dementia."

Natural modification is susceptible of some radical improvement, but the morbid deviation is only susceptible of relative amelioration, and a fatal heritage will descend to the progeny.

"There exist certain individuals who resume in their own persons the morbid organic tendencies of many previous generations."

"Asylums for the insane are, in this view, but a concentration of the principal forms of degeneration in the race."

Many of the principal probable causes of degeneration, *now* in operation, are suggested in the chapter, which deserve careful reflection, and this very sensible view is taken:

"Whether the human race, as a whole, is in a state of degeneration or not, is not the question; perhaps were it so, it might not be an insoluble

one. But it is clearly proved, or provable, that a great number of special degenerations are in progress in the species, and that these are in certain proportion to well-defined causes. These causes are in some degree removable; in other respects, owing to the constitution of society, they admit only of more or less modification. Be this as it may, the first step in the process is to *point out the source* of these evils, and the mode in which they first act upon individuals, and, through them, upon society at large."

The third problem refers to moral and criminal epidemics:

Are mental affections and tendencies contagious, like bodily diseases? If so, under what conditions?

The stand-point is this: "The philosopher recognizes no accident. To him there is no phenomenon without *a cause*, an antecedent adequate to its production; no cause but such as is reducible to *law*."

The elements are constant, though their combinations may be variable. The *history* of yesterday is the interpretation of *to-day*, the *prophecy* of to-morrow. The *irregularities* of the pendulum determined for us the shape of the earth, and the *irregularities* of Saturn and Uranus brought to light a planet where it ought to be. The *casualties* of polarized light defined and advanced all the laws of optics.

Thus the prevalence of crimes, delusions, and all forms of so-called aberrations of human thought and action are found to be referrible to known or ascertainable laws. "Man, who has an *individual* responsibility, is the plaything not only of *his own* passions and instincts, but, through the laws of his being, also of those of others."

The fourth problem is:

What effect has the work of the brain upon life, health and mind?

The writer receives as a philosophical truth that mind is a distinct entity—something independent of, and distinct from, matter; closely united, yet not allied; dependent for its manifestation, yet distinct in essence. An idea was prevalent among the philosophers of antiquity that the body was a clog and impediment to the acquisition of knowledge, distracting attention by its material relations and requirements; and later theologians look upon it as sin incarnate, the source of all evil and temptation, the barrier between the soul and heaven. In our times this assumed antagonism is merging in wider views.

"The present is essentially a practical age; both strong limbs and thoughtful minds are in requisition; and the spirit of the age is in nothing more manifest than in the multiform attempts, by the spread of rational education, and the increased attention to the sanitary condition of the masses, to balance the interests of these hitherto conflicting elements."

The brain is to be considered as perfectly adapted to the performance of its functions — thought, perception, volition, etc., as the muscles are for their offices; alike requiring, for perfection of development, appropriate nutrition, exercise and rest. It is strengthened and perfected by rational use, and injured by excess, just as other organs are.

Most of the evils attributed to mental labor more probably arise from the same causes which operate in other sedentary occupations. The youth of feeble and degenerate organization is selected as unfitted for physical labor, and doomed to the cramped position, the confined atmosphere, and generally unhealthy habits of the student; or the precocity of disease, often mistaken for genius or mental power, is forced by hot-house pressure. "The life is short, not *because* the intellectual development is precocious or forced, but it is short and bright from a common cause deeply ingrained in the original exceptional organization."

The case is, if possible, worse when a boy or man of talents below mediocrity is ambitious to excel in pursuits for which he is unfitted — as cripples may be anxious to excel in running or jumping. There is no more melancholy spectacle than a person mistaking their love for any object of mental effort for talent, and wearing out their lives in hopeless efforts at performance —

"Ever failing, yet sometimes happily unconscious of the failure; trying again and again, yet ever again coming far short of even their own imperfect ideal, — finally succumbing, worn out by constant attrition against the rock of the impossible."

"There are two sorts of good constitutions — good idle constitutions, and good working ones. When nature makes a great man, she presents him the latter gift."

Mr. Maclaren, of the Gymnasium, Oxford, says: "In the acquirement of bodily health, *mental occupation is a helpful, indeed, a necessary agent.*"

All reliable statistics show that *mental athletes* surpass, by far, in longevity mere *physical* athletes. He concludes:

"The injurious effects of mental labor are, in a great measure, owing—
To excessive forcing in youth;
To sudden or misdirected study;
To the co-operation of depressing emotions or passions;
To the neglect of the ordinary rules of hygiene;
To the neglect of the habits of the body; or,
To the presence of the seeds of disease, degeneration and decay in the system."

Illusions and hallucinations afford problem fifth:

Under what conditions are our senses reliable or unreliable witnesses?

An illusion is *a false appreciation of a real sensation.* A hallucination is *a projection externally of an inward conception;* in other words, *a subjective sensation.* This section, and its appendix, concerning Socrates and Pascal, are deeply interesting and instructive.

Somnambulism gives the problem:

"*To what extent may we be made the unconscious playthings of our physical organization?*"

Reverie and abstraction suggest the last problem:

"*To what extent is attention entitled to be considered the one great working faculty of the mind?*"

A great book is often a great mischief, and a little book is, now and then, as full of good things "as an egg is of meat." This little book, in our opinion, comes in the latter category — but we have given it all the space we can spare, and must close the notice "without ceremony."

Literary and Scientific.

Man in Genesis and in Geology; or, The Bible Account of Man's Creation Tested by Scientific Theories of his Origin and Antiquity. By Joseph P. Thompson, D.D., LL.D. 1 vol. 12mo. Price $1.

To reconcile Revelation with Science; to go back through Ethnology to the origin of the human race; and to examine critically the theories of the philosophers and writers on the Development Theory, in order to arrive at the facts, and thus settle the

question, is the object of the author. Rev. Dr. Thompson, of the Broadway Tabernacle Church, in New York, is considered one of the ripest scholars in America. The book contains the gist of a vast amount of Scriptural and scientific knowledge, reviewing all authorities to date. Published by S. R. Wells, New York.

A Philosophy of Heaven, Earth and the Millenium. "And God called the firmament Heaven."—Gen. i. 8. By James A. Spurlock, a Member of the Missouri Bar. W. J. Gilbert, Publishers, St. Louis, Mo.

Notes in England and Italy. By Mrs. Hawthorne. New York: G. P. Putnam & Son. 1869.

Those of our friends intending the "grand tour," will find many suggestive "art notes," and hints by which both their eyes and footsteps may be profitably guided, after crossing the great waters. The observant author somewhat checks our own desire of visiting the old world by one of her descriptions:

"We, of the other side of the Atlantic, have not the remotest idea how dirty a person can be who has not been washed for nearly three thousand years. * * * It is only in Europe that one can see a dirty face, and it is necessary to come to Europe to comprehend it. Description will not avail."

Fortunately, her graphic pictures of old world art, letters, antiquities, etc., redeem the prospect thus ominously shaded.

Through Night to Light. A Novel. By Frederich Spielhagen. Author's Edition. New York: Leypoldt & Holt. 1870.

Less known perhaps in this country than *Freytag* or *Auerbach*, Spielhagen surpasses both in strength, vigor, and depth of passion and thought. Prof. Schele de Vere is the translator into excellent English, and it is for sale by Keen & Cooke.

The Annals of Iowa. Published Quarterly by the State Historical Society at Iowa City. October, 1869. Edited by Sanford W. Huff, M.D., Corresponding Secretary.

We find in this number some interesting details on the Materia Medica and practice of the Indian tribes of the West, which we extract:

"MATERIA MEDICA.—This department of the profession is limited to a few vegetable simples, whose medical virtues have been determined by empirical trials, and consists mainly in a few roots, herbs, berries and barks of trees, which operate as emetics, cathartics, stimulants, tonics. etc.; but in order to secure their mystic virtues, they must be administered by a Mis-sis-ke In-nin-e, *i. e.*, literally a medicine man, and as Mis-sis-ke is herbage, grass, etc., it must be understood that these knights of the pestle and pill-box belong to the Botanic faculty.

"All medicines are esteemed equally useless unless their administration is accompanied with the requisite incantations; and these being only known to the mystic fraternity, even the progress of empiricism is deprived of its practical usefulness. The preservation of herbs, etc., is but little attended to; but small quantities are generally used, and these being dried and carefully kept in a leather portmanteau or sack, are commonly secure from humidity or heat. As the greatest amount of sickness prevails in the summer and autumn, it is most convenient for the practitioner to call on nature's drug store for the fresh article.

"PRACTICE OF MEDICINE.—These doctors are commonly very attentive, tender and careful of their patients, of both sexes, and of all ages. In fevers they administer emetics and cathartics; and if from spasm, congestion or other causes, a focus of irritation is suspected, bleeding, cupping and scarifications of the affected part is resorted to. A thin scale of flint is commonly the Indian lancet, scarificator, etc. In cupping, the mouth of the operator, or of some relation to the patient, supplies the place of a cup. In affections of the liver, deranged or impeded functions of the stomach, kidneys, bowels, etc., evacuants, as in fevers, are first resorted to, then recourse is had to epispâstics, such as the inner barks of the butternut tree, or white walnut, also for scarifications, etc.

"*Stopping Blood.*—For this purpose, which grows abundantly on all western prairies, as well as in barren and thinly timbered land, commonly called red root, is chewed or otherwise bruised and applied to the wound. They have many other vegetable styptics and astringents in general use.

"*Decoctions.*—This is a very common form for the administration of remedies, either internally or externally. Bathing affected joints or limbs with a strong decoction of some stimulating or pungent vegetable, is a very popular remedy for rheumatism, white swellings, scrofula, etc.

"*Infusions.*—The bark of the bitter elm, infused in cold water, and drank in considerable quantities, constitutes a popular remedy for the ague and fever.

"*Parturition.*—At such times a small separate lodge or camp is provided for the accommodation of the patient, and a few female attendants, in the centre of which a kind of swing is prepared, fastened above to a cross beam provided for the purpose. In this the patient is suspended by passing the strap or swing under the armpits; in this position the patient, by a slight genuflection, can throw her whole weight upon the swing,

or by standing erect upon her feet, thus relieving, in some degree, the tediousness of her painful situation. If, however, the accustomed course of nature is found to be impeded by preternatnral presentation or other causes, an accoucheur is called in to ply the mysteries of his profession upon the patient.

"Here we may be permitted to give a case as an example of Indian skill in this branch of the profession.

"In the summer of 1828, we were called to visit a patient at the distance of about fifty miles. We found her very much prostrated from continued and almost incessant labor, and worse than useless exercises for the last ninety-six hours — a shoulder presentation, with one arm protruding, pulse feeble, with cold perspiration. The doctors (for there were several in attendance) were plying their skill at the top of their medical science. Soon after our arrival we were informed by these professional gentlemen that one more important and often successful operation still remained untried upon the patient, and being assured that she should not be disturbed in the process of the operation, we consented to witness the performance, which was as follows:

"About three or four feet of a grape vine was procured, one end was artfully fashioned with a knife in the likeness of a snake's head, the patient was lying on her back, upon a mattress on the ground; the operator then proceeded silently to pass this artificial serpent over the body of the patient, commencing with the head of the vine snake about the breast, and holding the posterior end in his hand, dexterously imitating the serpentine motions of a snake, and slowly passing it over the abdomen, and towards the feet of the patient. This process was repeated until we deemed it necessary to resort to more efficient means for the relief of the patient. On inquiry we were told by these learned professors, that the fœtus, on seeing the snake approaching it, in that direction, would endeavor to escape from its confinement in order to avoid the dangerous beast, and thus accomplish the object so much desired!

"*Pathology*.—The general tendency of all their arguments and reasoning to explain the pathology and diagnostics of diseases, is to establish the assumed fact, that the patient has fallen under the baleful influence of some supernatural agency."

Book Notices.

The Transactions of the American Medical Association. Instituted 1847. Vol. XX. Philadelphia: Printed for the Association. 1869. Pp. 853.

Together with the Transactions we get a pamphlet, reprinted by order of the Association, being, "The Nomenclature of Dis-

eases. Drawn up by a Joint Committee appointed by the Royal College of Physicians of London. Subject to decennial revision."

The volume of the Transactions for the current year is superior in typographical appearance to many of its predecessors, and contains several articles of permanent value, aside from the formal report of its doings, plan of organization, code of ethics, and catalogue of members. We observe that the names of all permanent members who have not paid their annual dues are omitted. This would clearly be just as to all who became members after the adoption of such a rule, but seems to us unjust to those who were in full membership previously. However, renewed membership is so easily obtained by anybody, that it is hardly worth caviling about.

Several of the papers contained in the volume are of considerable value. Among these we may mention the essays on *Mollities Ossium;* Therapeutic Uses and Abuses of Quinia and its Salts (Dr. Rogers); the Prize Essays on Quinia as a Therapeutic Agent (Dr. Herrick), and on Atrohia and its Salts, by Dr. Bartholow. The paper on Albinism in the Negro Race, by Dr. Jones, of Nashville, is also a very good one.

The Physician's Hand-Book for 1870. By WILLIAM ELMER, M.D., and ALBERT D. ELMER, M.D. New York: W. A. Townshend & Adams, Publishers, No. 434 Broome Street. 1870.

THIS hand-book is perhaps too well known to require more than an announcement of its issue. To those who may not have seen it, we say that it contains, in addition to the usual blanks for charges, pocket ledger, etc., some 116 pages of condensed professional information, which must be exceedingly valuable in the way of *suggestions*. It is difficult to conceive of a more compact mass of generally useful information than is here afforded without materially enhancing the cost of a common diary.

Editorial.

The State Insane Hospital.

Dr. McFarland, Superintendent of the Insane Hospital, has published the following card:

Notice to the Public. — Against the better judgment of the undersigned, the practice has hitherto obtained of admitting general visitors to the apartments of the insane. It has been allowed under the idea that it might serve to allay the distrust existing in some minds toward all such institutions, and perhaps it may, to some extent, have had this effect. The existence of two boards of supervision — the board of trustees, and the board of state charities, whose examinations are frequent and thorough — leaves no longer a protest for a usage at once indelicate and inhuman, considering the character and object of the major class of visitors. The public are therefore respectfully informed that under a sense of duty to the afflicted, this practice will henceforth be discontinued, and residents of the vicinity of this institution will confer a favor, by stating to friends coming from abroad the reason why a practice, laudable as to the other state institutions in Jacksonville, must find its exception here.

This is an eminently proper measure, and we trust will be rigidly enforced. Every instinct of humanity revolts from the idea of having one's friends, thus fearfully diseased, exposed to the gaze of the idly curious, like wild animals in a menagerie. In the large majority of instances, such publicity seriously injures the patient, and either retards or imperils recovery. Every proper safeguard is thrown around the unfortunate inmates, so that none can be wrongly treated or restrained. Friends can always be reasonably indulged, but the mere sight-seer should be rigorously excluded.

Those who know the superintendent, Dr. McFarland, personally, need no guarantee that whatever kindness, zealous care, and professional skill can accomplish for his patients, will most certainly be secured.

Insanity is the result of physical disease of such a character that physiological rest of the affected organ is imperatively demanded. How can this be secured when the poor patient has, every day, to be "interviewed" by some sensational reporter?

Kansas City College of Physicians and Surgeons.

This is the title of a new candidate for Western professional favor. The first, a preliminary and partial course, commenced on the first Monday of the present month. The second, which is to be a full course, is announced to commence the first Monday of October, 1870. Simeon S. Todd, M.D., is Dean of the Faculty, and if his colleagues equal him in energy and ability, an excellent institution will be built up on the far-away banks of the Missouri. We trust the new school may both deserve and achieve success.

Credit Omitted.

Dr. Edwards' case of Ovariotomy, under the department of *Loot*, in the last number, accidentally was not credited to our valued contemporary, the *Leavenworth Medical Journal*. Its location, however, showed very plainly that there was no intentional "trenching on our neighbor's preserves."

New Medical Journal.

From distant Oregon comes the first number of a sprightly and neatly-clad *Medical and Surgical Reporter*. It is edited by E. R. Fiske, A.M., M.D., one of the Faculty of Willamette University, assisted by an able corps of collaborators. $4.00 *per annum*, in advance. We have marked passages for selection. Meanwhile, success to the *Oregon Reporter!* Address as above, Salem, Oregon.

The *Phrenological Journal* has now reached its *fiftieth* volume, and celebrates its birthday by changing from the quarto to the more convenient octavo form. Without indorsing its peculiar views of *chart* phrenology, we may say that it contains a large amount of entertaining and instructive matter, and is afforded at $3.00 a year. Specimen copies, 15 cents. S. R. Wells, publisher, 389 Broadway, New York.

Women as Medical Students.

Our table is flooded with circulars and rejoinders, remonstrances, petitions, solemn communications and squibs on the woman

question. As we propose to publish an exclusively scientific medical journal, we can not afford the space. The woman question, the abnormalities of the code, squabbles about fees, medical colleges, new systems, jeremiads and jubilates, etc., etc., must find some other mouthpiece.

Ladies and gentlemen, excuse us; we mean that this journal shall be *for all*, but not an *omnibus* to lug the above-mentioned passengers into general favor or notoriety.

THANKS to contemporaries who have so kindly noticed the improved issues of the JOURNAL.

Writing Prescriptions.

IN no particular is perfect exactitude and care more requisite than in writing prescriptions. If the proposed action is taken by the American Medical Association, forbidding, under pains and penalties, physicians from dispensing medicines when there are druggists "handy," these will become even more indispensable. We are no admirers of polypharmacy, and yet admit the advantage of suitable "adjuvants and corrigents" to the essential ingredient of a formula. It is clearly desirable that the several members should be neither physiologically nor chemically incompatible.

It is proper that the names of the ingredients should be written in officinal form, and with the least possible abbreviation. The scientific name is universal, the popular (or "English") name is local and variable.

Directions should be written in the vernacular. The whole should be "concise, precise, and decisive." Thereafter the responsibility rests upon the druggist. It is too much to ask of the druggist to read good or bad Latin sentences. It is not too much to demand of him knowledge of the authorized and standard scientific names of drugs.

But there are several things which puzzle us daily. For instance, why do well-educated and competent physicians, prescribing (just now) the *Bromide of Potassium*, always write it, in defiance of the nomenclature, *Bromide of Potash?* The same vice was seen a little while ago when Iodide of Potassium was the favorite panacea — it was always the Iodide of *Potash.*

Nothing is more common than to see the name written half Latin and half English. Or, again, it is written in the nominative instead of the genitive case.

Such blunders make the profession a laughing stock to even tolerably educated men:

Again: the punctuation is almost invariably defective. A curious example of this is seen in the, generally, very correct text of Elmer's Hand-Book for 1870. In giving several illustrations of prescriptions, they put a *period* after each article named. It is unnecessary to say that a semicolon is the proper punctuation. Again: they assume, contrary to the historical fact, that the character ℞ is an abbreviation for — *Recipe* (*take thou*), whereas it is merely the arbitrary sign of a medical prescription, and was anciently a hieroglyphic of invocation. The governing verb is *Misce*, and this requires the genitive. In either case the periods are wrong, as the sentence is not completed. They also give the druggist his directions in Latin (p. 113), which practically is dangerous.

Another trouble is illustrated in the following old-fashioned prescription:

℞ Mass. ex Hydrarg., - - - - } aa gr. xij;
Pulv. Aloes Socot., - - - - }
Pulv. Ipecac., - - - - - gr. ij;
M.

One druggist will put this up with *six* grains each of the blue mass and aloes, and another will put in *twelve* grains of each. The introduction of the brace ordinarily employed to assure the druggist that there has been no accidental omission of a quantity (more possible when three or more medicines are used) will perplex him, with chances that he will get it wrong, whichever way is desired.

A little knowledge is a dangerous thing, and unfortunately our friends, the apothecaries, illustrate this too often for our personal happiness. Substitution of similar medicines (tannin for gallic acid, for instance) is among the least of the liberties they take with our formulæ. They should be held responsible for dispensing the prescription exactly as it is written, unless there is clearly an error of a dangerous nature, when it is their business at once to notify the author.

Speaking of druggists, reminds us that the Chicago College of Pharmacy at a recent meeting (Nov. 17), took the following action:

Whereas, A Convention has been called for the revision of the U. S. Pharmacopœia to meet in Washington, in May, 1870, and it being desirable to make the proposed revision as complete and perfect as possible, and

Whereas, The interests of the Medical profession are identical with our own, in this, that the preparations and processes of the Pharmacopœia should be made to correspond with the ascertained wants of the profession and to the advancement in science during the past decade, and

Whereas, Our united efforts will enable us to accomplish more successfully the desired results, therefore be it

Resolved, That the members of the Medical profession and the Druggists of Chicago be respectfully invited to attend the Pharmacal Meetings of this College and participate in the discussions upon the next decennial revision of the U. S. Pharmacopœia.

The Pharmacal Meetings will be held on Wednesday evening of each week, commencing at 8 o'clock, in the rooms of the College, Room 12, 77 Dearborn street.

BACK NUMBERS.

Those subscribers who have written for back numbers of the Journal will be supplied soon. Temporary *indisposition* of our previous publisher (J. W. H.) causes a little delay, which certain proceedings I have instituted will speedily abate. J. Adams Allen.

Loot.

Malarial Hæmaturia.

Our readers are aware that since 1866 there has been prevailing, through different sections of the Southern States, a peculiar form of malarial disease, to which this designation has been affixed. It has been variously termed: "Hæmorrhagic malarial fever, black jaundice, cachæmia or malarial cachæmia, cachæmia hæmorrhagica, malignant congestive fever, icterode pernicious fever, purpuræmia, yellow remittent, yellow disease, canebrake yellow fever, new disease, intermittent icteroid fever, malarial hæmaturia, bilious hæmaturic fever," etc.

From an intelligent editorial in the *Southern Argus* (Selma, Ala..) we clip the following:

"It naturally occurs to us to ask why we should have a new and dangerous disease amongst us since the war, in addition to all our other troubles? Perhaps a good reason can be found. Our surrender, in 1865, has been the 'direful source of woes unnumbered" — political, social and pathological. Among the pathological woes is this disease; and it is consequent upon the others. The exclusive cause of this disease, as it is of fever and ague, chills, congestive chills, bilious fever, etc., is *malaria*. Of course we can not tell what malaria is; but we can tell what are found to be the conditions necessary for its generation, to-wit: heat, moisture (stagnant), decaying vegetable matter, and a long-continued still or motionless atmosphere, or absence of strong air currents and winds. These conditions have been more abundant in the South since the war than previously. The deranged labor system has left large tracts of land, previously fine plantations, to lie idle, the ditches on them to become filled, and the water drains generally clogged up; ponds have formed where once were fields; in other words, an efficient policing and hygiene of plantations and towns has been neglected. In this way our climate has been caused to resemble that of the warm infra-tropical countries; and with this state have come the diseases hitherto confined to those regions. All the diseases of our section are influenced by this atmospheric constitution. We have more of the graver forms of malarious diseases than of yore. It may be that the depression of spirits of our people has had some agency in this, in addition to the bad atmospheric constitution. They have co-operated. Melancholy and despondency always invite low forms of disease, and make the human body much more susceptible to attacks from morbific poisons. Thus comes about this fatal disease. The bad *morale* of our people cripples their vital energy, and makes them an easy prey: our neglected plantations and insufficient sanitary regulations and hygienic policing have made malaria more abundant and potent; so, these two causes combining, we have all the malarious fevers we have heretofore been used to in a graver and less manageable form, and, in addition thereto, a new and grave disease, of malarial origin, invited up from the tropics. This disease is not the yellow fever. There are two forms of yellow fever recognized in Aitken's work on the Practice of Medicine, viz.: specific yellow fever (the worst kind), and malarial yellow fever. These come as epidemics. The disease under consideration is neither one of these. The reader can select any of the names for it proposed above that suits his taste; though it would be well not to call it yellow fever, for fear of confounding it with the genuine disease of that name.

"We do not venture to suggest a treatment for this disease;

for in this the ablest members of the medical profession fail to agree among themselves; but we believe it is agreed that prevention is easier than cure, and that this disease can be prevented. The way to exterminate the disease is to enforce throughout the country the most rigid sanitary regulations, in the matter of ditching and draining especially. The way to prevent this disease in each individual case, is to cure the chills, to prevent the deterioration of the blood by long exposure to malarial influences. Chronic chills are the finger-boards to malarial hæmaturia; and this fact is at once the key to its cause, and the guide to a rational treatment. Almost invariably the victims of this disease have been long affected with malarial poison, if they have not had regular paroxysms of intermittent fever."

Embolism of the Heart and Pulmonary Arteries.

Playfair thinks that the term *embolism* should never be applied to cases of fibrinous obstruction of the heart and pulmonary arteries, uuless two conditions are met with on *post-mortem* examination. One is the existence of a clot in some part of the peripheral venous system, from which an embolus can be derived; the other is the existence in the pulmonary clots of distinct and separate portions of peculiar fibrine, which has traveled from the peripheral thrombus, to which it corresponds in structure, and around which more recent fibrin is generally deposited. If no clots exist in any of the veins, the case clearly cannot be one of embolism, but of thrombosis.

Embolism of the pulmonary artery is a frequent cause of sudden death after delivery, and Playfair reports a case in which the traveled embolus was not only found, but the exact site from which it was detached also determined. A young woman, in the sixth month of her third pregnancy, underwent an operation for fissure of the rectum; abortion took place on the eighth day, preceded by a pulse of 160, temperature of 103, and respirations 40. Then she had extreme dyspnœa, face excessively pale, and expressive of extreme anxiety, lips white, uterus well contracted, no pulse at wrist or posterior tibial artery, the sounds of the heart almost *nil;* in fact, she had all the symptoms of obstruction of the right side of the heart characteristically developed. She called incessantly for air, and died as if suffocated.

The right side of the heart was extremely distended, as were, also, the large veins of the neck and the two cavæ. At the bifurcation of the pulmonary artery, plugs of firm fibrine were found extending into the primary divisions of the pulmonary artery. In the centre of one of these fibrinous plugs was found another piece of fibrine, of the shape of an almond, very rough on one side, nearly an inch long, surrounded by, yet separate from, the remainder of the fibrine, which was of a less firm consistence.

At the junction of the internal and external iliac veins of the right side, there was a clot of fibrine about two and a half inches long, and about its centre was a roughened portion which fitted closely to the corresponding rough surface of the pulmonary clot.

It is very clear what had occurred. At some period of the eight days which elapsed between the operation and death, a coagulum had formed in the iliac vein. The portion found in the centre of the pulmonary coagulum had become detached, and was carried through the venous circulation until it was arrested in the pulmonary artery; then fresh fibrine was deposited around it until the pulmonary arteries became more and more obstructed, and death ensued.

In twenty-five other cases, twelve only were due to true embolism, and death generally took place after the nineteenth day; the remaining fifteen were cases of thrombosis, in which the fatal result occurred at a much more early period.—*Med. Gazette.*

Aqua Chlorini in Trichinitis.

During the late epidemic of trichinitis in Hildesheim, Germany, one of the physicians, taking the symptoms of his three first patients for cholerine, prescribed concentrated *Aq. chlorinii*, and noticed rapid subsidence of the colicky pains. He continued this remedy even after observing the mistake, and succeeded with it fully in fourteen cases, five of which were of the highest grade, by giving at first, every third hour, two tea-spoonfuls, and when the catarrh of the stomach had gradually subsided, one tea-spoonful, a draught of water to be taken five or ten minutes after the dose.—*Med. Bulletin.*

Deodorized Carbolic Acid.

Carbolic acid may be deodorized by mixing it in a crystalized form with twice its weight of gum camphor, and adding whiting to the compound. In this form it is said to be valuable, both as a disinfectant and as a protection to furs against moths.—*Med. Bulletin.*

Treatment of Delirium Tremens.

Dr. Fleming, of the Queen's Hospital, Birmingham (*British Medical Journal*), treats delirium tremens as follows: The patient is placed in bed. For a diet, milk and a strong beef-tea, alternately, every four hours, and gradually, as the appetite improves, chicken, mutton, etc., until the stomach can accept ordinary food. Alcoholic stimulants in every form are stopped at once and entirely. When the patient is faint the following is prescribed:

℞ Ætheris chlorici (Duncan & Flockhart), spiritus ammoniæ aromatici, sing., - - - - - - - - ʒ iij;
Tincturæ lavandulæ, comp., - - - - - - ʒ iv;
Spiritus vini gallici, - - - - - - - - ʒ x;

Two drachms for a dose, in a wine-glass of water, every two or four hours.

The further addition of alcoholic poison having been stopped, the objects of treatment are: First, To eliminate the poison already in the blood. Second, To control its effects. Third, To favor convalescence. To promote elimination by the skin and kidneys, the following mixture is given:

℞ Spiritus ætheris nitrosi, liquoris ammoniæ acetatis, sing., ʒ v;
Soda phosphatis, sodæ et potassa tartratis, sing., - ʒ v;
Aqua ad., - - - - - - - - - - ℥ xx; M.

Two ounces every four hours, two hours before meals.

A colocynth and hyoscyamus pill, with from ½ grain to a grain of the acetic extract of colchicum is given, should an active purge be indicated. To control the effects of the poison two drachms of the following are to be taken every four hours, one hour before food, in a large wine-glassful of water: Ten drachms of dilute phosphoric acid, with twenty drachms of tincture of hops. To induce sleep, the subjoined draught is ordered:

℞ Ticturæ cannabis, - - - - - M. xxx. ad lx.;
Liqoris morphiæ acetatis, - - - - M. xv. ad lx.;
Spiritus ætheris nitrici, - - - - - - - ʒ i;
Aquæ pimentii, - - - - - - - - ad ℥ ij; M.

This medication is pursued until convalescence is established, when the tonic regimen is strictly enforced, incuding pure air, good food, cold bathing, with zinc and iron as blood tonics.—*Med. Record.*

Detection of Blood Stains.

Dr. Richardson, in the *American Journal of Medical Science*, speaking of this subject, says:

Through the courtesy of Dr. Linderman, Director, and Mr. J. R. Eckfelt, Chief Assayer of the United States Mint, I was enabled to estimate the delicacy of the microscopic test for blood, as follows: Upon a square of waxed paper determined by Mr. Eckfelt, on the accurate balance used for the National Assays, to weigh exactly 48 milligrammes, I made twenty dots of fresh blood from my finger, which, when dry, added .4 of a milligramme to the original weight, and consequently were each on an average equivalent to about .02 of a milligramme, or 1-3200 of a troy grain nearly. The fourth part of one of these spots, weighing, of course, in round numbers 1-12000 of a grain, was detached with the point of a cataract needle, and, when moistened

under the 1-25 showed many hundred well-defined, red-blood corpuscles; ten circular ones among them, measured with the micrometer, averaged 1-3494 of an inch in diameter, and could, therefore, by this criterion of superior size alone, be diagnosticated from the corpuscles of an ox, sheep, or pig, with the same feeling of certainty with which any surgeon could testify that a perforation of the skull only half an inch across could not possibly have been made by any bullet measuring an inch in diameter.

The *Boston Journal of Chemistry*, on the same subject, says:

Prof. Bloxam has found that a mixture of tincture of guaiacum and ozonized ether (that is, a solution of peroxide of hydrogen in ether) instantly produces, with blood or blood stains, a beautiful blue tint. Prof. B., in the case of a stain twenty years old, extracted a single linen fibre with an almost inappreciable amount of the stain upon it; and, on subjecting it to this test, the blue color was readily distinguished through the microscope.

The spectroscope may also be employed as an extremely delicate test for blood-stains. Mr. Sorby has shown that the one-thousandth part of a grain of the red coloring matter of the blood may be thus detected with the greatest certainty.

Recipe for Burns.

Make a saturated solution of alum (four oz. in a quart of hot water). Dip a cotton cloth in this solution and apply immediately on the burn. As soon as it becomes hot or dry, replace it by another, and continue doing so as often as the cloth dries, which at first will be every few minutes. The pain will immediately cease; and, after twenty-four hours of this treatment, the burn will be healed, especially if commenced before blisters are formed. The astringent and drying qualities of the alum will entirely prevent their formation. The deepest burns, such as those caused by boiling water, drops of melted metal, phosphorus, gunpowder, fulminating powder, etc., all have been cured by this specific.—*Ibid.*

The Case of Dr. Schoeppe, of Carlisle, Pennsylvania.

Statement of a Committee of the Medical Society of the County of New York, in relation to a "Hypothetical Case," presented by Dr. Schoeppe, and based upon the testimony of the witnesses during his trial.

The papers forwarded by Dr. Schoeppe were presented at the stated meeting, September 6, 1869, the earliest moment practicable after their arrival, and referred to a committee of three, with power. The following is the result of their deliberations:

Abstract of the Evidence. — The only evidence in relation to the matter examined by the committee, is found in four octavo

pages of printed matter, entitled, "Hypothetical Case based upon Testimony of the Witnesses," and "Chemical Analysis based upon the Testimony of the Witnesses." It is therein shown that a woman, sixty-five years of age, a frequent sufferer from vertigo, complained of illness thirty-three hours before her death. She was probably nauseated, since an active emetic was taken, which produced its legitimate result about thirty-one hours before death. Eight hours after this, or twenty-three hours before death, she became semi-comatose; coma was pronounced in about three hours more; and twelve hours before death paralysis of the right side of the face and tongue had supervened. Paralysis of the entire right side of the body is rendered highly probable by the position in bed, and the warmth and moisture of the right side, as contrasted with the coldness and absence of perspiration on the left. Both pupils were contracted. The patient remained in this condition until her death. The positive symptoms were these: Old age, vertigo, "indisposition," vomiting, semi-coma merging into coma, paralysis of right side of face, difference in temperature of two sides of body, and contraction of pupils.

That feature, in this train of symptoms, which must at once attract attention, is the paralysis. Exclude this from the evidence, and the remaining signs would indicate either uræmic or narcotic poisoning. But with paralysis of *one side* of the body present, even more strongly than if it existed on both sides, poisoning by any medicinal agent is at once imperatively excluded. No drug, or combination of drugs, is capable of destroying the nervous power of a portion of the body situated at one side of the median line, while this power is retained by the corresponding part on the other side.

And yet this is precisely the condition, which lay witnesses have shown, obtained in the case above quoted. The right side of the face lost its nervous stimulus, and became incapable of resisting the normal power of the opposite muscles. These, therefore, dragged the mouth and nose toward the left. The tongue was in a similar condition. It is not necessary to refer to the remainder of the body, for though it is probable that hemiplegia existed, it would not strengthen our position were the proof complete.

That the symptoms were due to blood poisoning consequent upon kidney disease, is possible, but not probable, since death from uræmia is commonly ushered in by convulsions. We have a much more likely cause in either softening or sanguineous apoplexy in the brain. The former is a recognized cause of all the symptoms in this case, and upon inspection the diseased organ may yield no other evidence of the change than a reduction of the normal firmness of the parts.

This brings us naturally to the autopsy, which was conducted

in a deplorably negligent and unscientific manner. The examination of the brain revealed an absence of effused blood in the substance of the organ, and also from its superficial parts, unless the "large amount of blood in the cranium, the origin of which the examining physician could not tell," were clotted. This, however, is unlikely, both from the fluidity of the blood in other parts, and the fact that apoplexy was not therefrom suspected. A portion of the brain near the fourth ventricle was found to be softened, but twelve days after death, even in winter, a slight degree, at least, of such change might be expected. We therefore attach very little importance to this discovery. The arteries of this organ should have been carefully traced, since a coagulum forming suddenly in one or more of them would be likely to produce very sudden death with vertigo, nausea, paralysis and coma. The softened part should have been submitted to microscopical investigation. The heart should have been scrutinized with utmost care as to the condition of its valves and its size; and the arteries with regard to their coats; especially in the kidneys of so aged a person should have been sought some explanation of the phenomena. All of these points were omitted, and we have the single item of positive intelligence, of questionable value, that softening existed.

To return — cerebral apoplexy is probably excluded, and we are brought to the conclusion that white softening, or partial anæmia of the brain, was the cause of death. With regard to the *post-mortem* appearances in this affection, we may quote from one of the highest authorities in matters of this nature, Professor Niemeyer, who states that "Partial anæmia of the brain can not by any means always be definitely made out in the dead body. * * * On account of the difficulty of deciding whether a portion of brain has been anæmic during life, we should make it a rule to seek most carefully for any obstruction of the cerebral arteries, particularly of the arteria fossæ Sylvii, in any cases where the patient has died from a chronic brain disease, or an acute one beginning with a sudden occurrence of hemiplegia, unless the autopsy gives some other satisfactory explanation of the symptoms. Before attention was called to the occurrence of this anomaly, autopsy, in cases of severe brain disease with hemiplegia, often furnished nothing satisfactory."

The same author quotes Bamberger with deference, as expressing the opinion that it is well nigh impossible, in cases of sudden death preceded by hemiplegia and coma, to predict whether sanguineous apoplexy or partial anæmia would be discovered upon examining the brain.

As may be inferred from the first quotation, white softening of the brain is due to the more or less rapid plugging of cerebral arteries by clots of blood or fibrin, which thus cut off the vascular

supply, and produce death (necrosis) of the brain tissue to an extent commensurate with the distribution of the artery or arteries involved. This may be caused by a diseased condition of the walls of the vessels of the brain, or by a plug coming from the heart or lungs.

The prominent symptoms which announce this condition are vertigo, which may have existed for many months, nausea, and finally paralysis, coma and death.

It is therefore our opinion that the patient died from natural causes, judging exclusively from the "Hypothetical Case" presented to us.

Wm. B. Lewis, M.D.,
Emil Neoggerath, M.D.,
A. Flint, Jr., M.D.

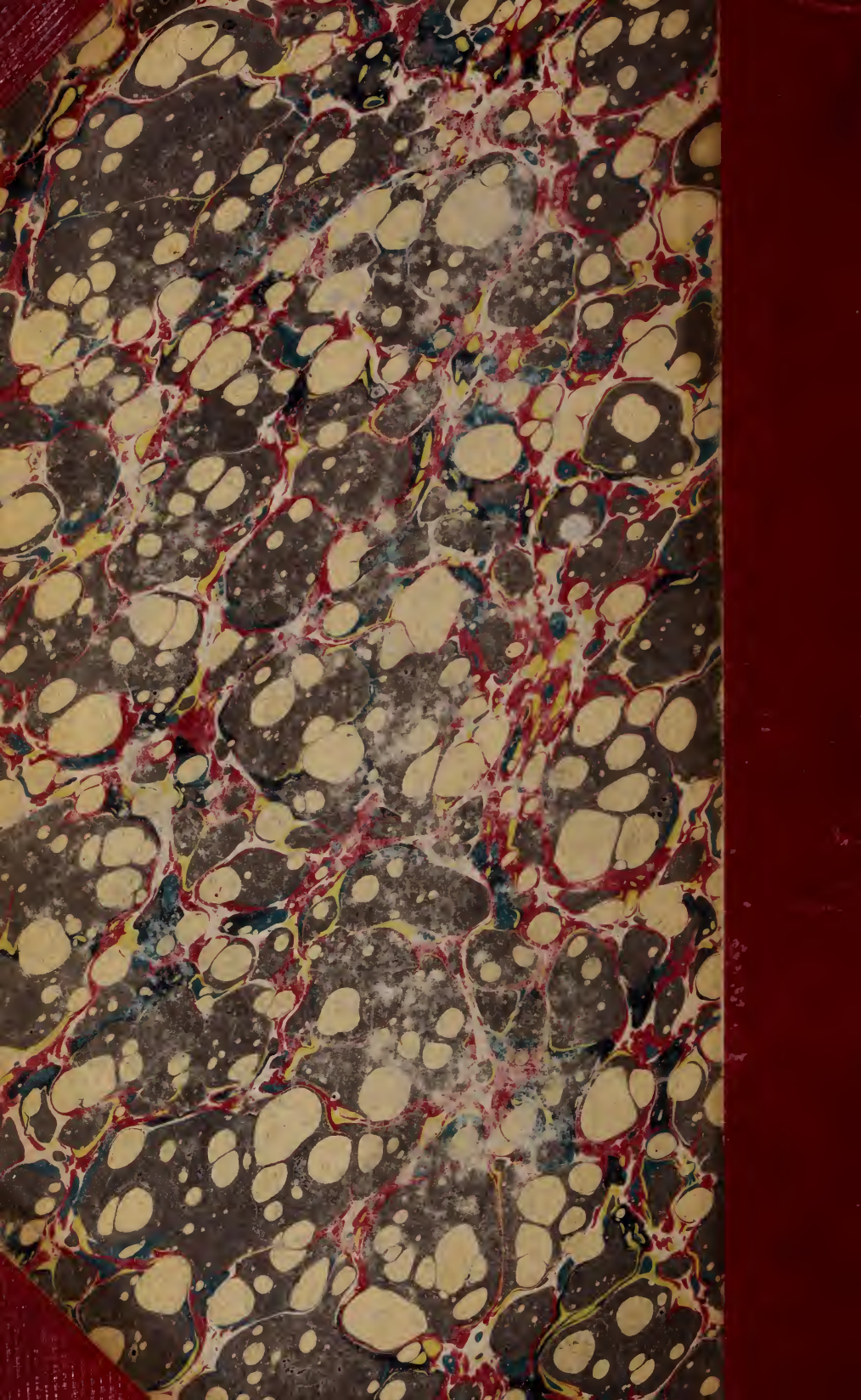
—*Medical Record.*

Dr. Schoeppe has been sentenced to death, but we believe Gov. Geary has temporarily suspended the execution. So far as the published evidence goes, we most fully believe that his hanging would be nothing more nor less than judicial murder.

Lactic Acid in Croup.

℞. Acid lactici gtt. xv ad gtt. xx; aq. ℥ ss M., may be used to advantage in croup. This quantity to be used every half hour with an inhaling apparatus, diminishing the acid to gtt. x, then to gtt. v, and inhaling it but every half hour or two hours, when the dyspnœa decreases, which is said to disappear entirely in seven, ten, or twelve hours. Protect the eyes and face from the vapor. Dr. Weber prescribes, besides this local treatment, the following internally: ℞. Sodæ bicarb., ʒ ij; aq. ℥ iv. M. Sig. A table spoonful every half hour, or every hour, till the dyspnœa disappears.—*Med. Gazette. Med. Bulletin.*

Milk.

Dr. Cameron, a Dublin chemist, has been experimenting on the milk of the sow, and has shown that it contains eighteen per cent. of nutritious matter, while human milk contains but eleven per cent. The relative nutritive values of different kinds of milk may be thus arranged in an increasing order: Human milk, cow's, goat's, ewe's, mare's, ass's, and sow's. This accounts for the rapid growth of young pigs compared with other animals.

obits 428
456
550
551